



Natural
Resources
Conservation
Service

In cooperation with
United States
Department of
Interior, Bureau of Land
Management and Bureau
of Indian Affairs; and
University of Nevada
Agricultural
Experiment Station

Soil Survey of Elko County, Nevada, Southeast Part Part I

How To Use This Soil Survey

This survey is divided into three parts. Part I includes general information about the survey area; descriptions of the detailed soil map units and soil series in the area; and a description of how the soils formed. Part II describes the use and management of the soils and the major soil properties. Part III includes the maps.

The **detailed soil map units** follow the general information about the survey area. These map units can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**, note the number of the map sheet, and turn to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Index to Map Units** in Part I of this survey, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Summary of Tables** shows which table has data on a specific land use for each detailed soil map unit. See **Contents** for sections of this publication that may address your specific needs.

A **State Soil Geographic Database (STATSGO)** is available for this survey area. This database consists of a soils map at a scale of 1 to 250,000 and descriptions of groups of associated soils. It replaces the general soil map published in older soil surveys. The map and the database can be used for multicounty planning, and map output can be tailored for a specific use. More information about the State Soil Geographic Database for this survey area, or any portion of Nevada, is available at the local office of the Natural Resources Conservation Service, and on the internet at http://www.ftw.nrcs.usda.gov/stat_data.html.

Some standards or values may change as more information is collected and analyzed. Thus, as older published interpretive information becomes outdated, new interpretive data must be generated and tailored to local conditions. This information is added to the State Subset of the **National Soil Information System (NASIS)** database as needed. Map Unit Interpretation Records are the soil survey specific data and interpretations in the state soil survey database.

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service has leadership for the Federal part of the National Cooperative Soil Survey.

Major fieldwork for this soil survey was completed in 1992. Soil names and descriptions were approved in 1993. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1992. This survey was made cooperatively by the Natural Resources Conservation Service, Bureau of Land Management, Bureau of Indian Affairs, and University of Nevada Agricultural Experiment Station. It is part of the technical assistance furnished to the Clover and Ruby Soil Conservation Districts.

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

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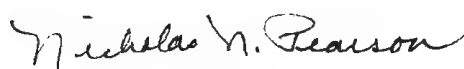
Foreword

This soil survey contains information that can be used in land-planning programs in Elko County, Nevada, Southeast Part. It contains predictions of soil behavior for selected land uses. The survey also highlights limitations and hazards inherent in the soil, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

This soil survey is designed for many different users. Farmers, ranchers, foresters, and agronomists can use it to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the survey to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the survey to help them understand, protect, and enhance the environment.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are shallow to bedrock. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described. Information on specific uses is given for each soil. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Nevada Cooperative Extension.



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Soil Survey of Elko County Southeast Part, Nevada

By Paul W. Blackburn, Natural Resources Conservation Service

Fieldwork by Paul W. Blackburn, Ed Fenn, Leon Lato, Dave Pickel, Ian Reid, and Alan Wasner, Natural Resources Conservation Service

United States Department of Agriculture, Natural Resources Conservation Service,
in cooperation with,
United States Department of the Interior, Bureau of Land Management and Bureau of
Indian Affairs and the University of Nevada Agricultural Experiment Station

How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind or segment of the landscape. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landscape, soil scientists develop a concept, or model, of how the soils were formed. Thus, during mapping, this model enables the soil scientists to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Individual soils on the landscape commonly merge into one another as their characteristics gradually change. To construct an accurate map, however, soil scientists must

determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted color, texture, size, and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to

determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

The descriptions, names, and delineations of the soils in this survey area do not fully agree with those of the soils in adjacent survey areas. Differences are the result of a better knowledge of soils, modifications in series concepts, or variations in the intensity of mapping or in the extent of the soils in the survey areas.

In some small areas of the survey area, access was denied or otherwise restricted. Soil map units were interpolated across the area of denied access using photographic interpretation based on the map units in the adjacent areas. The accuracy of the photo interpretation is dependent on several factors, including the size and complexity of the area; the scale and quality of the photobase; and the degree of relief across the landscape. Because the mapping is made using methods other than field investigation, the reliability of mapping is reduced.

General Nature of the Survey Area

This section gives general information about the survey area. It briefly discusses history; industries, transportation, and recreation; physiography, drainage, and geology; and climate.

The Elko County, Nevada, Southeast Part soil survey area is in the northeast part of Nevada. There are 2,808,842 acres in the survey area.

The survey area is bordered on the east by Utah and on the south by White Pine County.

The area consists of numerous north-south trending mountain ranges and intervening valleys. Elevations range from 9,600 feet in the mountains to 5,600 feet in the valleys.

The survey area is sparsely populated. The main industry is ranching.

The public land in the area is administered by the Bureau of Land Management.

Descriptions, names, and delineations of soils in this soil survey do not fully agree with those on soil maps for adjacent survey areas. Differences are the result of better knowledge of soils, modifications in series concepts, intensity of mapping, or the extent of soils within the survey.

History

This area was originally inhabited by the Shoshone Indians. The first known white men to set foot into the area were the French-Canadian fur trappers of the Hudson Bay Company beginning with the second Snake Country Expedition in June, 1826. These expeditions were led by Peter Skene Ogden, trapping brigade leader for Hudson Bay Company.

Currie, 62 miles south of Wells got its name from rancher Joseph H. Currie who came to the Elko County area in 1885 and engaged in the livestock business. In 1905 Currie became a railroad station on the Nevada Northern Railroad line.

In September, 1869, the Central Pacific Railroad installed a boxcar to serve as a freight and passenger station in the Meadows about a mile west of the present town of Wells. This was the original Humboldt Wells Townsite, the home and office of Wells first resident R. P. "Bob" Hamil, Station agent for the railroad and express agent for Wells Fargo and Company.

In 1917 William Smith and a partner, Eckstien, started a service station east of the convergence of U.S. Highway 40 and 50. After business improved, Smith bought out Eckstien and decided to build an establishment half in Nevada and half in Utah which became the Eastline Townsite or more commonly known as Wendover (25).

Industry, Transportation, and Recreation

The main industries in the survey area are tourism, gaming, and ranching.

Wendover, located on the Nevada-Utah state line and just off Interstate 80, on the northeast part of the survey

area, draws many tourists where gaming is the main industry. The city of Wells, located on Interstate 80 but in the northwest part of the survey area, also receives many tourists for its gaming but also for nearby recreational and hunting opportunities.

Most of the ranching in the survey area is in Ruby Valley and Clover Valley. The ranches are dominantly cow/calf operations, and the current year's crop is generally sold in the fall and exported. Where suited, the lands of the survey area are used for production of hay and pasture.

Interstate 80 traverses the north part of the survey area from west to east connecting Wells with Wendover. U.S. Highway 93 traverses the survey area from north to south mainly from the northwestern part to the south central part. Alternate Highway 50 traverses the survey area from the south central part north connecting with Wendover at the Nevada and Utah state line. State Highway 11 runs west from U.S. Highway 93 connecting with State Highway 26 on the western edge of the survey. Improved gravel roads are located mainly in Ruby Valley on the west side of the area and in Pilot Creek Valley in the northeast part. The remaining part of the survey area is served by unimproved dirt roads and jeep trails.

Lime is presently being mined in the Goshute Mountains. No other active mines are presently being operated within the survey area but a heap/leach gold mine is planned in the Kingsley Mountains. Higher precious metal prices will continue to stimulate exploration.

Municipal water is supplied to the city of Wells from 2 deep wells. Municipal water from the city of Wendover is currently supplied via pipeline from Big Springs and Johnson Springs located in Goshute Valley as well as 4 deep wells in the Silver Zone area. Due to rapid growth of Wendover one new well is planned as well as a 500,000 gallon wastewater treatment plant. This plant will recycle water for the Wendover golf course and city park. In rural areas, water for household use is obtained from wells or from dependable springs.

Valleys are provided with early season irrigation water by spring runoff from nearby mountains. Late season water may be provided by individual irrigation wells or small ponds and reservoirs. At higher elevations, small springs and seeps provide limited watering facilities for livestock and wildlife.

Ruby Lake located on the Ruby Marsh Wildlife Refuge receives water from spring runoff from the Ruby Mountains. Additional water is supplied by springs and seeps. Ruby Lake is the largest body of water in the survey area and is an important area for wildlife and recreation.

Physiography, Drainage, and Geology

Water from the majority of the tributaries in the soil

survey area eventually ends up in bolson floors where it evaporates. The intermittent flow of these streams is supplied by spring runoff and convection storms during the summer months. The exceptions are those perennial streams that drain into Ruby Lake.

The geology of the survey area is variable and complex. The fault block ranges in the survey area consist mainly of Ordovician to Permian carbonate rocks (8). Jurassic Tertiary Plutonic rocks and Tertiary volcanic and shallow intrusive rocks occur locally. Pleistocene and Holocene lacustrine sediments and beach deposits make up the valley floors of the survey area. These lacustrine sediments and beach deposits are derived from pluvial lakes which occupied areas in Ruby, Clover, Independence, Goshute, and Antelope Valleys, and in the Wendover area by the western edge of Ancient Lake Bonneville (20).

The carbonate rocks in the ranges consists mainly of limestone and dolomite. Volcanic and shallow intrusive rocks consist mainly of andesite and rhyolite.

Climite

Table 1 gives data on temperature and precipitation for the survey area as recorded at Ruby Lake and Wells Nevada for some period between 1961 to 1990. Table 2 shows probable dates of the first freeze in fall and the last freeze in the spring. Table 3 provides data on length of growing season.

In winter, the average temperatures at Ruby Lake and Wells are 28 and 25, degrees F°. The average daily minimum temperature is 16 degrees at Ruby Lake and 13 degrees at Wells. In summer, the average temperature is 66 degrees at Ruby Lake and 64 degrees at Wells. The average daily maximum temperature is 83 degrees at Ruby Lake and 84 degrees at Wells.

Growing degree days, shown in Table 1, are equivalent to "heat units". Beginning in the spring, growing degree days accumulate by the amount the average temperature exceeds a base temperature (40 degrees F°). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze of spring and the first freeze of fall.

The total annual precipitation is 13 inches at Ruby Lake and 10 inches at Wells. Of this, 40 to 50 percent usually falls in April through September. The growing season for most crops falls within this period. Thunderstorms occur on about 20 days each year, and most occur in summer.

On an average of 20 to 30 days, at least 1 inch of snow is on the ground. The number of such days varies greatly from year to year. Every few years a blizzard strikes the survey area with high winds and drifting snow. Even at

lower elevations, snow remains on the ground for many weeks and livestock suffer.

The average relative humidity in midafternoon is about 40 percent. Humidity is higher at night, and the average at

dawn is about 70 percent. The sun shines 80 percent of the time in summer, and 70 percent in winter. The prevailing wind is from the southwest. Average windspeed is highest, 7 miles per hour, in spring.

Detailed Soil Map Units

The map units on the detailed maps in Part III of this publication represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses. More information about each map unit is given under the headings "Use and Management of the Soils" and "Soil Properties."

A map unit delineation on the detailed soil maps represents an area dominated by one or more soils or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils or miscellaneous areas. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils and miscellaneous areas are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, are mapped without including areas of other taxonomic classes. Consequently, map units are made up of the soils or miscellaneous areas for which they are named and some "included" areas that belong to other taxonomic classes.

Most included soils have properties and behavioral characteristics similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, inclusions. They may or may not be mentioned in the map unit description. Other included soils and miscellaneous areas, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, inclusions. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The included areas of contrasting soils or miscellaneous areas are mentioned in the map unit descriptions. A few included areas may not have been observed, and consequently they are not mentioned in the

descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of included areas in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into segments that have similar use and management requirements. The delineation of such landscape segments on the map provides sufficient information for the development of resource plans, but if intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit. The principal hazards and limitations to be considered in planning for specific uses are identified in the tables and narrative in Part II.

Kinds of Map Units

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, wetness, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Some of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Wendane silt loam, rarely flooded is a phase of the Wendane series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes or associations.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas

are somewhat similar in all areas. Welch-Welsum complex is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Shabliss-Pyrat-Okan association is an example.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Playas is an example.

Acreage and Extent

Table 4 gives the acreage and proportionate extent of each map unit. Other tables (see "Summary of Tables") give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

Headings and Introductory Phases

In the map unit descriptions that follow, a semitabular format is used. In this format the major headings are centered in the column (for example, *Composition*). They identify the information grouped directly below them. Introducing each item of information under the centered heading is a term or phrase (for example, *Major Components*) that identifies or describes the information. Many of the centered headings and introductory terms are self-explanatory; however, some of them need further explanation and are defined in the Glossary. Explanations of the headings and introductory phrases are provided in the following paragraphs, generally in the order in which they are used in the map unit descriptions.

Composition is given for the components (soils or miscellaneous areas) identified in the name of the map unit as well as for the contrasting inclusions.

Contrasting Inclusions are areas of components that differ sufficiently in use and management from the soils or miscellaneous areas for which the map unit is named. As was explained earlier, inclusions can either be *similar* or *contrasting*. Note that in the *Composition* section a single percentage is provided for a named soil and its similar inclusions because their use and management are similar.

Map Unit Setting is given for the entire map unit. This section gives the position on the landscape. The landscape positions given for the entire map unit generally are broader than those given for each component. Below

the map unit setting, the position of each component and inclusion is listed, and the physiographic location of each is identified.

Major Component Description lists the characteristics of the major components. These include elevation, texture of the surface layer, drainage class, parent material, and climatic data.

Dominant Present Vegetation lists the common plants growing on each soil at the present time. The present vegetation may be similar to the potential native plant community, but in some areas it consists of other plants, either cultivated or wild, that dominate the soils in the map unit.

Ecological Site is the assigned rangeland or grazed forest land ecological site that identifies a unique potential native plant community. The plant species and production typical of each ecological site are listed by map unit in the section "Rangeland Plants and Woodland Understory." Additional information about these sites is provided under the heading "Rangeland and Grazeable Woodland Resource Management" in Part II of this publication. Further information also can be obtained from the local office of the Natural Resources Conservation Service.

Map Unit Descriptions

053--Palinor-Urmafot association

Composition

Major Components

Palinor very gravelly loam, 4 to 15 percent slopes--65 percent
Urmafot very gravelly loam, 8 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Wintermute gravelly silt loam, 2 to 8 percent slopes--8 percent
Inclusion 2: Izar very gravelly loam, 4 to 15 percent slopes--5 percent
Inclusion 3: Automal gravelly loam, 8 to 30 percent slopes--1 percent
Inclusion 4: Rock outcrop--1 percent

Map Unit Setting

Landscape position: Fan piedmonts

Palinor--Landform: Fan remnants; position on slope: lower

Urmafot--Landform: Fan remnants; position on slope: upper

Inclusion 1--Landform: Fan remnants; position on slope: lower

Inclusion 2--Landform: Pediments; geomorphic position: backslope

Inclusion 3--Landform: Fan remnants

Inclusion 4--Landform: Fan remnants; geomorphic position: backslope

Major Component Description

Palinor Series

Elevation: 5,100 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Urmafot Series

Elevation: 6,000 to 7,000 feet
 Precipitation: About 12 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 50 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Palinor: Indian ricegrass, black sagebrush, needleandthread
 Urmafot: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Inclusion 1: Indian ricegrass, bud sagebrush, shadscale, winterfat
 Inclusion 2: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 3: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 4: None

Ecological Site

Palinor: 028BY011NV
 Urmafot: 028BY006NV
 Inclusion 1: 028BY075NV
 Inclusion 2: 028BY011NV
 Inclusion 3: 028BY011NV
 Inclusion 4: None

062--Amtoft-Rock outcrop association

Composition

Major Components

Amtoft very gravelly loam, moist, 30 to 75 percent slopes--40 percent
 Rock outcrop--25 percent

Amtoft very gravelly loam, 30 to 75 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Kyler very gravelly loam, 15 to 50 percent slopes--8 percent
 Inclusion 2: Jericho very gravelly loam, 8 to 30 percent slopes--5 percent
 Inclusion 3: Theriot extremely stony loam, 15 to 50 percent slopes--1 percent
 Inclusion 4: Xeric Torriorthents very gravelly coarse sand, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Mountains and foothills

Amtoft--Landform: Mountains; geomorphic position: summit; position on slope: upper; shape of slope: convex

Rock outcrop--Landform: Mountains

Amtoft--Landform: Mountains; geomorphic position: summit; position on slope: upper; shape of slope: convex

Inclusion 1--Landform: Hills

Inclusion 2--Landform: Fan remnants

Inclusion 3--Landform: Mountains; position on slope: lower

Inclusion 4--Landform: Drainageways

Major Component Description

Amtoft Series

Elevation: 4,400 to 6,700 feet
 Precipitation: About 10 inches
 Air temperature: About 47 degrees
 Frost-free season: About 125 days
 Surface rock fragments: 5 percent cobbles; 60 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Rock outcrop Miscellaneous Area

Elevation: 4,400 to 6,700 feet

Amtoft Series

Elevation: 4,400 to 6,700 feet
 Precipitation: About 10 inches
 Air temperature: About 47 degrees
 Frost-free season: About 125 days
 Surface rock fragments: 5 percent cobbles; 60 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained

Dominant parent material: Residuum and colluvium
derived from limestone and dolomite

Dominant Present Vegetation

Amtoft: Indian ricegrass, black sagebrush, bluebunch
wheatgrass, galleta
Amtoft: Indian ricegrass, Utah juniper, black sagebrush,
galleta
Inclusion 1: Indian ricegrass, black sagebrush, galleta,
needleandthread
Inclusion 2: Indian ricegrass, black sagebrush, galleta,
needleandthread
Inclusion 3: Indian ricegrass, black sagebrush,
horsebrush, needleandthread
Inclusion 4: Indian ricegrass, Nevada ephedra, big
sagebrush, rubber rabbitbrush

Ecological Site

Amtoft: 028AY034NV
Amtoft: 028AY027NV
Rock outcrop: None
Inclusion 1: 028AY004NV
Inclusion 2: 028AY013NV
Inclusion 3: 028AY044NV
Inclusion 4: 028AY038NV

066--Zimbob association

Composition

Major Components

Zimbob very gravelly loam, 8 to 50 percent slopes--50
percent
Zimbob very gravelly loam, very shallow, 8 to 50
percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Palino very gravelly sandy loam, 4 to 15
percent slopes--5 percent
Inclusion 2: Okan gravelly sandy loam, 2 to 8 percent
slopes--5 percent
Inclusion 3: Rock outcrop--4 percent
Inclusion 4: Tecomar extremely gravelly loam, 15 to 50
percent slopes--1 percent

Map Unit Setting

Landscape position: Hills
Zimbob--Landform: Hills
Zimbob--Landform: Hills
Inclusion 1--Landform: Fan remnants
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Hills; geomorphic position:
backslope
Inclusion 4--Landform: Hills; geomorphic position:

summit; position on slope: upper

Major Component Description

Zimbob Series

Elevation: 5,100 to 7,400 feet
Precipitation: About 12 inches
Air temperature: About 47 degrees
Frost-free season: About 100 days
Surface rock fragments: 80 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium
derived from limestone and dolomite

Zimbob Series

Elevation: 5,100 to 7,400 feet
Precipitation: About 12 inches
Air temperature: About 47 degrees
Frost-free season: About 100 days
Surface rock fragments: 15 percent cobbles; 80 percent
gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium
derived from limestone and dolomite

Dominant Present Vegetation

Zimbob: Indian ricegrass, black sagebrush,
needleandthread
Zimbob: Indian ricegrass, Utah juniper, black
sagebrush
Inclusion 1: Indian ricegrass, black sagebrush,
needleandthread
Inclusion 2: Indian ricegrass, Wyoming big sagebrush,
needleandthread
Inclusion 3: None
Inclusion 4: Black sagebrush, bluebunch wheatgrass,
singleleaf pinyon

Ecological Site

Zimbob: 028BY016NV
Zimbob: 028BY059NV
Inclusion 1: 028BY011NV
Inclusion 2: 028BY010NV
Inclusion 3: None
Inclusion 4: 028BY090NV

067--Tecomar-Tecomar, dry-Pookaloo association

Composition

Major Components

Tecomar extremely gravelly loam, 15 to 50 percent
slopes--40 percent

Tecomar extremely gravelly loam, 8 to 50 percent slopes--25 percent
 Pookaloo very gravelly loam, 15 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Zimbob very gravelly loam, 15 to 50 percent slopes--8 percent
 Inclusion 2: Lithic Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic gravelly loam, 8 to 30 percent slopes--5 percent
 Inclusion 3: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Mountains and foothills
 Tecomar--Landform: Hills; geomorphic position: backslope
 Tecomar--Landform: Hills; geomorphic position: backslope
 Pookaloo--Landform: Hills; geomorphic position: backslope; aspect: north
 Inclusion 1--Landform: Hills; geomorphic position: backslope; position on slope: lower
 Inclusion 2--Landform: Mountains; geomorphic position: backslope; shape of slope: concave
 Inclusion 3--Landform: Hills; geomorphic position: summit

Major Component Description

Tecomar Series

Elevation: 5,600 to 7,600 feet
 Precipitation: About 12 inches
 Air temperature: About 46 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 5 percent cobbles; 60 percent gravel
 Surface layer texture: Extremely gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Tecomar Series

Elevation: 5,600 to 7,600 feet
 Precipitation: About 12 inches
 Air temperature: About 46 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 5 percent cobbles; 60 percent gravel
 Surface layer texture: Extremely gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Pookaloo Series

Elevation: 5,600 to 7,600 feet
 Precipitation: About 12 inches
 Air temperature: About 46 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 50 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Tecomar: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Tecomar: Black sagebrush, bluebunch wheatgrass, singleleaf pinyon
 Pookaloo: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon
 Inclusion 1: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 2: Indian ricegrass, bluebunch wheatgrass, mountain big sagebrush
 Inclusion 3: None

Ecological Site

Tecomar: 028BY008NV
 Tecomar: 028BY090NV
 Pookaloo: 028BY060NV
 Inclusion 1: 028BY016NV
 Inclusion 2: 028BY079NV
 Inclusion 3: None

069--Zimbob-Hyzen-Rock outcrop association

Composition

Major Components

Zimbob very gravelly loam, 15 to 50 percent slopes--40 percent
 Hyzen extremely stony loam, 15 to 50 percent slopes--30 percent
 Rock outcrop--15 percent

Contrasting Inclusions

Inclusion 1: Theriot extremely stony loam, 15 to 50 percent slopes--5 percent
 Inclusion 2: Zimbob extremely stony loam, 15 to 50 percent slopes--5 percent
 Inclusion 3: Xerollic Calciorthids, loamy-skeletal, mixed, mesic very gravelly loam, 2 to 8 percent slopes--3 percent

Inclusion 4: Urmafot gravelly silt loam, 4 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills

Zimbob--Landform: Hills; geomorphic position: backslope

Hyzen--Landform: Hills; geomorphic position: backslope

Rock outcrop--Landform: Hills

Inclusion 1--Landform: Hills; geomorphic position: backslope; position on slope: lower

Inclusion 2--Landform: Hills; geomorphic position: backslope; position on slope: lower

Inclusion 3--Landform: Drainageways

Inclusion 4--Landform: Fan remnants

Major Component Description

Zimbob Series

Elevation: 5,800 to 7,700 feet

Precipitation: About 12 inches

Air temperature: About 47 degrees

Frost-free season: About 100 days

Surface rock fragments: 15 percent cobbles; 80 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Hyzen Series

Elevation: 5,800 to 7,700 feet

Precipitation: About 13 inches

Air temperature: About 44 degrees

Frost-free season: About 85 days

Surface rock fragments: 5 percent cobbles; 45 percent gravel

Surface layer texture: Extremely stony loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Rock outcrop Miscellaneous Area

Elevation: 5,800 to 7,700 feet

Dominant Present Vegetation

Zimbob: Indian ricegrass, black sagebrush, needleandthread

Hyzen: Indian ricegrass, Scribner needlegrass, black sagebrush, littleleaf mountainmahogany

Rock outcrop: None

Inclusion 1: Indian ricegrass, bud sagebrush, needleandthread, shadscale

Inclusion 2: Indian ricegrass, Utah juniper, black sagebrush

Inclusion 3: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 4: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Ecological Site

Zimbob: 028BY016NV

Hyzen: 028BY066NV

Rock outcrop: None

Inclusion 1: 028BY019NV

Inclusion 2: 028BY059NV

Inclusion 3: 028BY010NV

Inclusion 4: 028BY006NV

070--Stewval-Eastwell association

Composition

Major Components

Stewval very gravelly fine sandy loam, 8 to 30 percent slopes--65 percent

Eastwell gravelly sandy loam, 8 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Eastwell very gravelly sandy loam, 8 to 30 percent slopes--8 percent

Inclusion 2: Entic Durorthids, loamy-skeletal, mixed, mesic gravelly loam, 2 to 8 percent slopes--3 percent

Inclusion 3: Wintermute gravelly silt loam, 2 to 8 percent slopes--4 percent

Map Unit Setting

Landscape position: Hills and intermontane basins

Stewval--Landform: Hills; geomorphic position: backslope

Eastwell--Landform: Fan remnants

Inclusion 1--Landform: Fan remnants; position on slope: upper

Inclusion 2--Landform: Fan remnants; position on slope: lower

Inclusion 3--Landform: Fan remnants; position on slope: lower

Major Component Description

Stewval Series

Elevation: 5,800 to 6,700 feet

Precipitation: About 9 inches

Air temperature: About 50 degrees

Frost-free season: About 110 days

Surface rock fragments: 10 percent stones and boulders; 80 percent gravel

Surface layer texture: Very gravelly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from volcanic rocks

Eastwell Series

Elevation: 5,800 to 6,700 feet
 Precipitation: About 8 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 65 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed
 rocks, loess and volcanic ash

Dominant Present Vegetation

Stewval: Indian ricegrass, black sagebrush, galleta,
 needleandthread
 Eastwell: Indian ricegrass, black sagebrush,
 needleandthread
 Inclusion 1: Indian ricegrass, black sagebrush, spiny
 hopsage
 Inclusion 2: Indian ricegrass, bud sagebrush,
 shadscale, winterfat
 Inclusion 3: Indian ricegrass, bud sagebrush,
 shadscale, winterfat

Ecological Site

Stewval: 028AY004NV
 Eastwell: 028BY011NV
 Inclusion 1: 028BY053NV
 Inclusion 2: 028BY075NV
 Inclusion 3: 028BY075NV

071--Stewval-Wesfil-Rock outcrop association

Composition

Major Components

Stewval very gravelly fine sandy loam, 8 to 30 percent
 slopes--50 percent
 Wesfil very channery loam, 15 to 50 percent slopes--20
 percent
 Rock outcrop--15 percent

Contrasting Inclusions

Inclusion 1: Xerollic Haplargids, loamy-skeletal, mixed,
 mesic very gravelly loam, 15 to 50 percent slopes--9
 percent
 Inclusion 2: Pioche very gravelly loam, 15 to 50 percent
 slopes--3 percent
 Inclusion 3: Xeric Torriorthents gravelly sandy loam, 2
 to 8 percent slopes--2 percent

Inclusion 4: Xeric Torripsamments, mixed, mesic fine
 sand, 2 to 4 percent slopes--1 percent

Map Unit Setting

Landscape position: Hills
 Stewval--Landform: Hills; geomorphic position:
 backslope
 Wesfil--Landform: Hills; geomorphic position: summit;
 shape of slope: convex
 Rock outcrop--Landform: Hills
 Inclusion 1--Landform: Fan remnants
 Inclusion 2--Landform: Hills; geomorphic position:
 backslope
 Inclusion 3--Landform: Drainageways
 Inclusion 4--Landform: Drainageways

Major Component Description

Stewval Series

Elevation: 5,100 to 6,400 feet
 Precipitation: About 9 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent stones and boulders;
 80 percent gravel
 Surface layer texture: Very gravelly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from volcanic rocks

Wesfil Series

Elevation: 5,100 to 6,400 feet
 Precipitation: About 8 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent stones and boulders;
 60 percent gravel
 Surface layer texture: Very channery loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from volcanic rocks

Rock outcrop Miscellaneous Area

Elevation: 5,100 to 6,400 feet

Dominant Present Vegetation

Stewval: Thurber needlegrass, black sagebrush,
 bluebunch wheatgrass
 Wesfil: Indian ricegrass, Thurber needlegrass, black
 sagebrush
 Rock outcrop: None
 Inclusion 1: Thurber needlegrass, bluebunch
 wheatgrass
 Inclusion 2: Utah juniper, bluebunch wheatgrass,
 mountain big sagebrush, singleleaf pinyon

Inclusion 3: Indian ricegrass, Wyoming big sagebrush, galleta, spiny hopsage

Inclusion 4: Indian ricegrass, Wyoming big sagebrush, fourwing saltbush, needleandthread

Ecological Site

Stewval: 028AY036NV

Wesfil: 028AY035NV

Rock outcrop: None

Inclusion 1: 028AY022NV

Inclusion 2: 028BY062NV

Inclusion 3: 028AY028NV

Inclusion 4: 028AY005NV

080--Stewval very gravelly fine sandy loam, 8 to 30 percent slopes

Composition

Major Components

Stewval very gravelly fine sandy loam, 8 to 30 percent slopes--85 percent

Contrasting Inclusions

Inclusion 1: Wintermute very gravelly sandy loam, 2 to 8 percent slopes--7 percent

Inclusion 2: Lithic Torriorthents gravelly loam, 2 to 8 percent slopes--6 percent

Inclusion 3: Typic Durorthids, loamy-skeletal, mixed, mesic gravelly loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills

Stewval--Landform: Hills; geomorphic position: backslope; position on slope: upper

Inclusion 1--Landform: Fan remnants

Inclusion 2--Landform: Hills; geomorphic position: backslope; position on slope: lower

Inclusion 3--Landform: Fan remnants

Major Component Description

Stewval Series

Elevation: 5,800 to 6,200 feet

Precipitation: About 9 inches

Air temperature: About 50 degrees

Frost-free season: About 110 days

Surface rock fragments: 10 percent stones and boulders; 80 percent gravel

Surface layer texture: Very gravelly fine sandy loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Stewval: Indian ricegrass, black sagebrush, galleta, needleandthread

Inclusion 1: Indian ricegrass, bud sagebrush, shadscale, winterfat

Inclusion 2: Indian ricegrass, black sagebrush, galleta, needleandthread

Inclusion 3: Indian ricegrass, bud sagebrush, shadscale, winterfat

Ecological Site

Stewval: 028AY004NV

Inclusion 1: 028BY075NV

Inclusion 2: 028AY004NV

Inclusion 3: 028BY075NV

092--Wesfil-Wintermute-Okan association

Composition

Major Components

Wesfil very channery loam, 2 to 8 percent slopes--35 percent

Wintermute gravelly silt loam, 2 to 8 percent slopes--30 percent

Okan sandy loam, 2 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Automal gravelly silt loam, 2 to 4 percent slopes--7 percent

Inclusion 2: Lithic Xeric Torriorthents very gravelly loam, 2 to 4 percent slopes--6 percent

Inclusion 3: Zorravista fine sand, 4 to 30 percent slopes--1 percent

Inclusion 4: Linoyer gravelly sandy loam, 0 to 4 percent slopes--1 percent

Map Unit Setting

Landscape position: Hills and intermontane basins

Wesfil--Landform: Hills

Wintermute--Landform: Fan remnants; position on slope: lower

Okan--Landform: Inset fans

Inclusion 1--Landform: Fan remnants; position on slope: upper

Inclusion 2--Landform: Hills

Inclusion 3--Landform: Dunes

Inclusion 4--Landform: Inset fans

Major Component Description

Wesfil Series

Elevation: 5,800 to 6,200 feet

Precipitation: About 8 inches

Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent stones and boulders;
 60 percent gravel
 Surface layer texture: Very channery loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from volcanic rocks

Wintermute Series

Elevation: 5,800 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed
 rocks

Okan Series

Elevation: 5,800 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed
 rocks, loess and volcanic ash

Dominant Present Vegetation

Wesfil: Indian ricegrass, black sagebrush,
 needleandthread
 Wintermute: Indian ricegrass, bud sagebrush,
 shadscale, winterfat
 Okan: Indian ricegrass, Wyoming big sagebrush, spiny
 hopsage
 Inclusion 1: Indian ricegrass, black sagebrush,
 needleandthread
 Inclusion 2: Indian ricegrass, needleandthread, pigmy
 sagebrush
 Inclusion 3: Indian ricegrass, black greasewood,
 shadscale, thickspike wheatgrass
 Inclusion 4: Indian ricegrass, winterfat

Ecological Site

Wesfil: 028BY016NV
 Wintermute: 028BY075NV
 Okan: 028BY052NV
 Inclusion 1: 028BY011NV
 Inclusion 2: 028BY040NV
 Inclusion 3: 028BY021NV

Inclusion 4: 028BY013NV

098--Wesfil-Tarnach association

Composition

Major Components

Wesfil very channery loam, 15 to 50 percent slopes--50
 percent
 Tarnach very gravelly loam, 15 to 50 percent slopes--
 20 percent
 Wesfil very channery loam, 4 to 15 percent slopes--15
 percent

Contrasting Inclusions

Inclusion 1: Xeric Torriorthents sandy loam, 4 to 8
 percent slopes--6 percent
 Inclusion 2: Rock outcrop--5 percent
 Inclusion 3: Lithic Xeric Torriorthents, loamy-skeletal,
 mixed (calcareous), mesic very gravelly loam, 15 to 50
 percent slopes--3 percent
 Inclusion 4: Lithic Xeric Torriorthents, loamy-skeletal,
 mixed (calcareous), mesic very gravelly loam, 4 to 8
 percent slopes--1 percent

Map Unit Setting

Landscape position: Hills
 Wesfil--Landform: Hills; geomorphic position: summit;
 shape of slope: convex
 Tarnach--Landform: Hills; geomorphic position:
 backslope; shape of slope: plane
 Wesfil--Landform: Hills; geomorphic position: summit;
 shape of slope: convex
 Inclusion 1--Landform: Drainageways
 Inclusion 2--Landform: Hills; geomorphic position:
 summit
 Inclusion 3--Landform: Hills; geomorphic position:
 backslope
 Inclusion 4--Landform: Hills; geomorphic position:
 summit

Major Component Description

Wesfil Series

Elevation: 5,200 to 7,000 feet
 Precipitation: About 8 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent stones and boulders;
 60 percent gravel
 Surface layer texture: Very channery loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from volcanic rocks

Tarnach Series

Elevation: 5,200 to 7,000 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 50 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from volcanic rocks

Wesfil Series

Elevation: 5,200 to 7,000 feet
 Precipitation: About 8 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent stones and boulders;
 60 percent gravel
 Surface layer texture: Very channery loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from volcanic rocks

Dominant Present Vegetation

Wesfil: Indian ricegrass, black sagebrush, galleta,
 needleandthread
 Tarnach: Indian ricegrass, black sagebrush, bluebunch
 wheatgrass, galleta
 Wesfil: Indian ricegrass, black sagebrush, galleta,
 needleandthread
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush,
 galleta, spiny hopsage
 Inclusion 2: None
 Inclusion 3: Indian ricegrass, Utah juniper, black
 sagebrush, galleta
 Inclusion 4: Indian ricegrass, needleandthread, pigmy
 sagebrush

Ecological Site

Wesfil: 028AY004NV
 Tarnach: 028AY034NV
 Wesfil: 028AY004NV
 Inclusion 1: 028AY028NV
 Inclusion 2: None
 Inclusion 3: 028AY027NV
 Inclusion 4: 028AY007NV

099--Wesfil-Armespan-Heist association***Composition*****Major Components**

Wesfil very channery loam, 8 to 15 percent slopes--40
 percent

Armespan very gravelly sandy loam, 2 to 8 percent
 slopes--25 percent

Heist silt loam, 2 to 4 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Xeric Torriorthents sandy loam, 4 to 15
 percent slopes--9 percent
 Inclusion 2: Armespan gravelly sandy loam, 4 to 15
 percent slopes--3 percent
 Inclusion 3: Lithic Xeric Torriorthents, loamy-skeletal,
 mixed (calcareous), mesic very gravelly sandy loam, 8
 to 30 percent slopes--2 percent
 Inclusion 4: Typic Torriorthents, coarse-silty, mixed
 (calcareous), mesic silt loam, 0 to 2 percent slopes--1
 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
 Wesfil--Landform: Hills; geomorphic position: summit;
 shape of slope: convex
 Armespan--Landform: Fan remnants
 Heist--Landform: Inset fans
 Inclusion 1--Landform: Fan remnants; geomorphic
 position: backslope
 Inclusion 2--Landform: Fan remnants
 Inclusion 3--Landform: Hills; geomorphic position:
 backslope
 Inclusion 4--Landform: Inset fans

Major Component Description**Wesfil Series**

Elevation: 5,600 to 7,000 feet
 Precipitation: About 8 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent stones and boulders;
 60 percent gravel
 Surface layer texture: Very channery loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from volcanic rocks

Armespan Series

Elevation: 5,600 to 6,500 feet
 Precipitation: About 8 inches
 Air temperature: About 52 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed
 rocks

Heist Series

Elevation: 5,600 to 6,500 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees

Frost-free season: About 110 days
 Surface rock fragments: 35 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Wesfil: Indian ricegrass, black sagebrush, galleta, needleandthread
 Armespan: Indian ricegrass, black sagebrush, galleta, needleandthread
 Heist: Indian ricegrass, winterfat
 Inclusion 1: Indian ricegrass, Utah juniper, black sagebrush
 Inclusion 2: Indian ricegrass, black sagebrush, needleandthread, spiny hopsage
 Inclusion 3: Indian ricegrass, black sagebrush, bluebunch wheatgrass, galleta
 Inclusion 4: Indian ricegrass, galleta, winterfat

Ecological Site

Wesfil: 028AY004NV
 Armespan: 028AY004NV
 Heist: 028BY084NV
 Inclusion 1: 028AY041NV
 Inclusion 2: 028AY047NV
 Inclusion 3: 028AY034NV
 Inclusion 4: 028AY002NV

100--Benin-Mazuma association

Composition

Major Components

Benin silt loam, 0 to 2 percent slopes--55 percent
 Mazuma silt loam, 2 to 4 percent slopes--30 percent

Contrasting Inclusions

Inclusion 1: Typic Natrargids, fine-loamy, mixed, mesic gravelly sandy loam, 2 to 4 percent slopes--5 percent
 Inclusion 2: Kawich fine sand, 4 to 30 percent slopes--5 percent
 Inclusion 3: Typic Torriorthents, fine-silty, mixed (calcareous), mesic silt loam, 2 to 4 percent slopes--3 percent
 Inclusion 4: Kawich fine sand, 4 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
 Benin--Landform: Lake plains
 Mazuma--Landform: Lake plains
 Inclusion 1--Landform: Lake plains
 Inclusion 2--Landform: Dunes

Inclusion 3--Landform: Lake plains
 Inclusion 4--Landform: Dunes

Major Component Description

Benin Series

Elevation: 4,800 to 4,900 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Mazuma Series

Elevation: 4,800 to 4,900 feet
 Precipitation: About 6 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Dominant Present Vegetation

Benin: Alkali sacaton, black greasewood, inland saltgrass
 Mazuma: Black greasewood, bottlebrush squirreltail, shadscale
 Inclusion 1: Indian ricegrass, sickle saltbush, western wheatgrass
 Inclusion 2: Indian ricegrass, alkali sacaton, black greasewood, fourwing saltbush
 Inclusion 3: Indian ricegrass, sickle saltbush, western wheatgrass
 Inclusion 4: Indian ricegrass, alkali sacaton, black greasewood, fourwing saltbush

Ecological Site

Benin: 028BY020NV
 Mazuma: 028BY074NV
 Inclusion 1: 028BY047NV
 Inclusion 2: 028AY011NV
 Inclusion 3: 028BY047NV
 Inclusion 4: 028AY011NV

101--Toano-Linoyer association

Composition

Major Components

Toano silt loam, 0 to 2 percent slopes--70 percent
 Linoyer silt loam, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Zerk gravelly loam, 0 to 4 percent slopes--9 percent

Inclusion 2: Katelana silt loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins

Toano--Landform: Inset fans

Linoyer--Landform: Inset fans

Inclusion 1--Landform: Spits

Inclusion 2--Landform: Lake plains

Major Component Description**Toano Series**

Elevation: 5,600 to 6,000 feet

Precipitation: About 7 inches

Air temperature: About 47 degrees

Frost-free season: About 115 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Linoyer Series

Elevation: 5,600 to 6,000 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Toano: Indian ricegrass, sickle saltbush, western wheatgrass

Linoyer: Indian ricegrass, winterfat

Inclusion 1: Indian ricegrass, winterfat

Inclusion 2: Bottlebrush squirreltail, shadscale

Ecological Site

Toano: 028BY047NV

Linoyer: 028BY013NV

Inclusion 1: 028BY084NV

Inclusion 2: 028BY073NV

103--Benin-Playas association***Composition*****Major Components**

Benin silt loam, 0 to 2 percent slopes--45 percent

Playas silty clay loam, 0 to 1 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Katelana silt loam, 0 to 2 percent slopes--5 percent

Inclusion 2: Sheffit silt loam, 0 to 2 percent slopes--5 percent

Inclusion 3: Aquic Torriorthents, fine, montmorillonitic (calcareous), mesic silt loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins

Benin--Landform: Lake plains

Playas--Landform: Lake plains

Inclusion 1--Landform: Lake plains

Inclusion 2--Landform: Lake plains

Inclusion 3--Landform: Lake plains

Major Component Description**Benin Series**

Elevation: 6,000 to 6,100 feet

Precipitation: About 7 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Playas Miscellaneous Area

Elevation: 6,000 to 6,100 feet

Precipitation: About 7 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface layer texture: Silty clay loam

Drainage class: Very poorly drained

Dominant Present Vegetation

Benin: Alkali sacaton, black greasewood, inland saltgrass

Playas: None

Inclusion 1: Black greasewood, bottlebrush squirreltail, shadscale

Inclusion 2: Basin wildrye, big sagebrush, black greasewood

Inclusion 3: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Ecological Site

Benin: 028BY020NV

Playas: None

Inclusion 1: 028BY074NV

Inclusion 2: 028BY028NV

Inclusion 3: 028BY004NV

111--Gravier-Armespan association

Composition

Major Components

Gravier very gravelly sandy loam, 2 to 8 percent slopes--60 percent

Armespan very gravelly sandy loam, 2 to 8 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Kyler stony sandy loam, 2 to 8 percent slopes--7 percent

Inclusion 2: Loray very gravelly loam, 2 to 4 percent slopes--6 percent

Inclusion 3: Xeric Torriorthents gravelly silt loam, 8 to 15 percent slopes--1 percent

Inclusion 4: Katelana silt loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins

Gravier--Landform: Barrier beaches

Armespan--Landform: Barrier beaches

Inclusion 1--Landform: Pediments

Inclusion 2--Landform: Barrier beaches; position on slope: lower

Inclusion 3--Landform: Spits

Inclusion 4--Landform: Lagoons

Major Component Description

Gravier Series

Elevation: 4,800 to 5,400 feet

Precipitation: About 6 inches

Air temperature: About 50 degrees

Frost-free season: About 115 days

Surface rock fragments: 45 percent gravel

Surface layer texture: Very gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Armespan Series

Elevation: 4,800 to 5,400 feet

Precipitation: About 8 inches

Air temperature: About 52 degrees

Frost-free season: About 130 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Gravier: Indian ricegrass, galleta, shadscale

Armespan: Indian ricegrass, black sagebrush, galleta, needleandthread

Inclusion 1: Indian ricegrass, black sagebrush, galleta, needleandthread

Inclusion 2: Indian ricegrass, bud sagebrush, galleta, shadscale

Inclusion 3: Indian ricegrass, black sagebrush, galleta, needleandthread

Inclusion 4: Bottlebrush squirreltail, shadscale

Ecological Site

Gravier: 028AY018NV

Armespan: 028AY013NV

Inclusion 1: 028AY004NV

Inclusion 2: 028AY012NV

Inclusion 3: 028AY004NV

Inclusion 4: 028BY073NV

113--Gravier-Jericho association

Composition

Major Components

Gravier very gravelly sandy loam, 4 to 15 percent slopes--30 percent

Gravier gravelly loam, 2 to 8 percent slopes--30 percent

Jericho very gravelly loam, 2 to 8 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Loray very gravelly sandy loam, 4 to 15 percent slopes--8 percent

Inclusion 2: Toano silt loam, 2 to 8 percent slopes--5 percent

Inclusion 3: Xerollic Calciorthids, sandy-skeletal, mixed, mesic very gravelly sandy loam, 15 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins

Gravier--Landform: Barrier beaches

Gravier--Landform: Barrier beaches

Jericho--Landform: Fan remnants

Inclusion 1--Landform: Spits

Inclusion 2--Landform: Inset fans

Inclusion 3--Landform: Spits; geomorphic position: backslope

Major Component Description

Gravier Series

Elevation: 4,800 to 5,200 feet

Precipitation: About 6 inches
 Air temperature: About 50 degrees
 Frost-free season: About 115 days
 Surface rock fragments: 45 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Gravier Series

Elevation: 4,800 to 5,200 feet
 Precipitation: About 6 inches
 Air temperature: About 50 degrees
 Frost-free season: About 115 days
 Surface rock fragments: 35 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Jericho Series

Elevation: 4,800 to 5,200 feet
 Precipitation: About 8 inches
 Air temperature: About 49 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 45 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Gravier: Indian ricegrass, galleta, shadscale
 Gravier: Indian ricegrass, galleta, winterfat
 Jericho: Indian ricegrass, black sagebrush, galleta, needleandthread
 Inclusion 1: Indian ricegrass, bud sagebrush, galleta, shadscale
 Inclusion 2: Indian ricegrass, winterfat
 Inclusion 3: Indian ricegrass, black sagebrush, galleta, needleandthread

Ecological Site

Gravier: 028AY018NV
 Gravier: 028AY002NV
 Jericho: 028AY013NV
 Inclusion 1: 028AY012NV
 Inclusion 2: 028BY013NV
 Inclusion 3: 028AY013NV

116--Gravier-Izamatch-Loray association

Composition

Major Components

Gravier gravelly loam, 2 to 4 percent slopes--40 percent
 Izamatch gravelly sandy loam, 2 to 4 percent slopes--30 percent
 Loray gravelly sandy loam, 0 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Armespan gravelly sandy loam, 0 to 4 percent slopes--5 percent
 Inclusion 2: Luning loamy sand, 0 to 4 percent slopes--5 percent
 Inclusion 3: Toano silt loam, 0 to 2 percent slopes--3 percent
 Inclusion 4: Tooele silt loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
 Gravier--Landform: Barrier beaches
 Izamatch--Landform: Barrier beaches; position on slope: upper
 Loray--Landform: Barrier beaches
 Inclusion 1--Landform: Barrier beaches; position on slope: upper
 Inclusion 2--Landform: Spits
 Inclusion 3--Landform: Drainageways
 Inclusion 4--Landform: Lake plains

Major Component Description

Gravier Series

Elevation: 4,400 to 5,200 feet
 Precipitation: About 6 inches
 Air temperature: About 50 degrees
 Frost-free season: About 115 days
 Surface rock fragments: 35 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Izamatch Series

Elevation: 4,400 to 5,100 feet
 Precipitation: About 6 inches
 Air temperature: About 52 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 50 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Somewhat excessively drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Loray Series

Elevation: 4,400 to 5,100 feet
 Precipitation: About 6 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Gravier: Indian ricegrass, galleta, winterfat
 Izamatch: Indian ricegrass, galleta, shadscale
 Loray: Indian ricegrass, bud sagebrush, galleta, shadscale
 Inclusion 1: Indian ricegrass, black sagebrush, galleta, needleandthread
 Inclusion 2: Indian ricegrass, fourwing saltbush, spiny hopsage
 Inclusion 3: Indian ricegrass, sickle saltbush, western wheatgrass
 Inclusion 4: Black greasewood, bottlebrush squirreltail, shadscale

Ecological Site

Gravier: 025XY002NV
 Izamatch: 028AY018NV
 Loray: 028AY012NV
 Inclusion 1: 028AY013NV
 Inclusion 2: 028AY006NV
 Inclusion 3: 028AY033NV
 Inclusion 4: 028BY074NV

118--Gravier-Automal-Zerk association

Composition

Major Components

Gravier very gravelly sandy loam, 2 to 4 percent slopes--40 percent
 Automal gravelly silt loam, 2 to 4 percent slopes--25 percent
 Zerk gravelly sandy loam, 2 to 4 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Okan gravelly sandy loam, 2 to 4 percent slopes--5 percent
 Inclusion 2: Piltown loamy fine sand, 2 to 4 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
 Gravier--Landform: Barrier beaches
 Automal--Landform: Barrier beaches; position on slope: upper
 Zerk--Landform: Spits
 Inclusion 1--Landform: Drainageways
 Inclusion 2--Landform: Dunes

Major Component Description

Gravier Series

Elevation: 5,700 to 6,000 feet
 Precipitation: About 6 inches
 Air temperature: About 50 degrees
 Frost-free season: About 115 days
 Surface rock fragments: 45 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Automal Series

Elevation: 5,700 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 25 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Zerk Series

Elevation: 5,700 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Gravier: Indian ricegrass, winterfat
 Automal: Indian ricegrass, black sagebrush, needleandthread
 Zerk: Indian ricegrass, winterfat
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, spiny hopsage
 Inclusion 2: Black greasewood, bottlebrush squirreltail, sickle saltbush

Ecological Site

Gravier: 028BY084NV
 Automal: 028BY011NV
 Zerk: 028BY084NV
 Inclusion 1: 028BY052NV
 Inclusion 2: 028BY097NV

119--Wintermute-Linoyer association***Composition*****Major Components**

Wintermute gravelly sandy loam, 2 to 8 percent slopes--65 percent
 Linoyer very fine sandy loam, 2 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Typic Torriorthents, coarse-loamy, mixed (calcareous), mesic sandy loam, 2 to 8 percent slopes--5 percent
 Inclusion 2: Heist gravelly sandy loam, 2 to 8 percent slopes--6 percent
 Inclusion 3: Okan gravelly sandy loam, 2 to 8 percent slopes--4 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Wintermute--Landform: Fan remnants
 Linoyer--Landform: Inset fans
 Inclusion 1--Landform: Fan remnants; position on slope: lower
 Inclusion 2--Landform: Inset fans
 Inclusion 3--Landform: Inset fans

Major Component Description**Wintermute Series**

Elevation: 5,700 to 6,200 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Linoyer Series

Elevation: 5,700 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Very fine sandy loam
 Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Wintermute: Indian ricegrass, bud sagebrush, shadscale, winterfat
 Linoyer: Indian ricegrass, winterfat
 Inclusion 1: Indian ricegrass, bud sagebrush, shadscale
 Inclusion 2: Indian ricegrass, winterfat
 Inclusion 3: Indian ricegrass, Wyoming big sagebrush, needleandthread

Ecological Site

Wintermute: 028BY075NV
 Linoyer: 028BY013NV
 Inclusion 1: 028BY017NV
 Inclusion 2: 028BY084NV
 Inclusion 3: 028BY010NV

120--Izamatch-Armespan-Cliffdown association***Composition*****Major Components**

Izamatch very gravelly sandy loam, 2 to 8 percent slopes--40 percent
 Armespan very gravelly sandy loam, 2 to 8 percent slopes--30 percent
 Cliffdown very gravelly sandy loam, 2 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Loray gravelly sandy loam, 2 to 8 percent slopes--9 percent
 Inclusion 2: Typic Torriorthents, sandy-skeletal, mixed, mesic very gravelly coarse sand, 2 to 8 percent slopes--3 percent
 Inclusion 3: Jericho very gravelly sandy loam, 2 to 8 percent slopes--2 percent
 Inclusion 4: Typic Torriorthents, coarse-loamy, mixed (calcareous), mesic, shallow gravelly loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
 Izamatch--Landform: Barrier beaches
 Armespan--Landform: Barrier beaches
 Cliffdown--Landform: Barrier beaches; position on slope: lower
 Inclusion 1--Landform: Barrier beaches; position on slope: lower
 Inclusion 2--Landform: Drainageways

Inclusion 3--Landform: Fan remnants
Inclusion 4--Landform: Barrier beaches

Major Component Description

Izamatch Series

Elevation: 4,200 to 5,300 feet
Precipitation: About 6 inches
Air temperature: About 52 degrees
Frost-free season: About 130 days
Surface rock fragments: 50 percent gravel
Surface layer texture: Very gravelly sandy loam
Drainage class: Somewhat excessively drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Armespan Series

Elevation: 4,200 to 5,300 feet
Precipitation: About 8 inches
Air temperature: About 52 degrees
Frost-free season: About 130 days
Surface rock fragments: 40 percent gravel
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Cliffdown Series

Elevation: 4,200 to 4,500 feet
Precipitation: About 6 inches
Air temperature: About 52 degrees
Frost-free season: About 130 days
Surface rock fragments: 5 percent cobbles; 35 percent gravel
Surface layer texture: Very gravelly sandy loam
Drainage class: Somewhat excessively drained
Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Izamatch: Indian ricegrass, galleta, shadscale
Armespan: Indian ricegrass, black sagebrush, galleta, needleandthread
Cliffdown: Indian ricegrass, galleta, shadscale
Inclusion 1: Indian ricegrass, bud sagebrush, galleta, shadscale
Inclusion 2: Indian ricegrass, fourwing saltbush, spiny hopsage
Inclusion 3: Indian ricegrass, black sagebrush, galleta, needleandthread
Inclusion 4: Indian ricegrass, galleta, horsebrush, shadscale

Ecological Site

Izamatch: 028AY018NV

Armespan: 028AY004NV
Cliffdown: 028AY018NV
Inclusion 1: 028AY012NV
Inclusion 2: 028AY037NV
Inclusion 3: 028AY004NV
Inclusion 4: 028AY014NV

122--Gravier-Izamatch association

Composition

Major Components

Gravier gravelly loam, 2 to 8 percent slopes--50 percent
Izamatch very gravelly sandy loam, 2 to 8 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Luning gravelly loamy sand, 2 to 8 percent slopes--5 percent
Inclusion 2: Loray very gravelly loamy sand, 2 to 8 percent slopes--5 percent
Inclusion 3: Gravier gravelly loam, 2 to 8 percent slopes--3 percent
Inclusion 4: Typic Torriorthents, sandy-skeletal, carbonatic, mesic extremely gravelly coarse sand, 0 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
Gravier--Landform: Barrier beaches
Izamatch--Landform: Barrier beaches; position on slope: lower
Inclusion 1--Landform: Spits
Inclusion 2--Landform: Spits
Inclusion 3--Landform: Barrier beaches
Inclusion 4--Landform: Drainageways

Major Component Description

Gravier Series

Elevation: 4,700 to 5,200 feet
Precipitation: About 6 inches
Air temperature: About 50 degrees
Frost-free season: About 115 days
Surface rock fragments: 35 percent gravel
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Izamatch Series

Elevation: 4,700 to 5,200 feet
Precipitation: About 6 inches
Air temperature: About 52 degrees
Frost-free season: About 130 days

Surface rock fragments: 50 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Gravier: Indian ricegrass, galleta, shadscale
 Izamatch: Indian ricegrass, galleta, shadscale
 Inclusion 1: Indian ricegrass, galleta, horsebrush, shadscale
 Inclusion 2: Indian ricegrass, bud sagebrush, galleta, shadscale
 Inclusion 3: Indian ricegrass, galleta, winterfat
 Inclusion 4: Indian ricegrass, fourwing saltbush, spiny hopsage

Ecological Site

Gravier: 028AY018NV
 Izamatch: 028AY018NV
 Inclusion 1: 028AY014NV
 Inclusion 2: 028AY012NV
 Inclusion 3: 028AY002NV
 Inclusion 4: 028AY037NV

130--Tooele-Benin association

Composition

Major Components

Tooele sandy loam, 2 to 4 percent slopes--65 percent
 Benin silt loam, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Toano silt loam, 2 to 8 percent slopes--8 percent
 Inclusion 2: Kawich fine sand, 4 to 30 percent slopes--3 percent
 Inclusion 3: Typic Natrargids, fine-loamy, mixed, mesic gravelly sandy loam, 2 to 4 percent slopes--3 percent
 Inclusion 4: Loray very gravelly sandy loam, 2 to 4 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
 Tooele--Landform: Lake plains
 Benin--Landform: Lake plains
 Inclusion 1--Landform: Lake plains
 Inclusion 2--Landform: Dunes
 Inclusion 3--Landform: Lake plains
 Inclusion 4--Landform: Barrier beaches

Major Component Description

Tooele Series

Elevation: 4,400 to 4,800 feet
 Precipitation: About 7 inches
 Air temperature: About 50 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 25 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Benin Series

Elevation: 4,400 to 4,800 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

Tooele: Black greasewood, bottlebrush squirreltail, shadscale
 Benin: Alkali sacaton, black greasewood, inland saltgrass
 Inclusion 1: Indian ricegrass, sickle saltbush, western wheatgrass
 Inclusion 2: Indian ricegrass, black greasewood, shadscale, thickspike wheatgrass
 Inclusion 3: Black greasewood, bottlebrush squirreltail, shadscale
 Inclusion 4: Indian ricegrass, bud sagebrush, shadscale

Ecological Site

Tooele: 028BY074NV
 Benin: 028BY020NV
 Inclusion 1: 028BY047NV
 Inclusion 2: 028BY021NV
 Inclusion 3: 028BY074NV
 Inclusion 4: 028BY017NV

140--Gollaher-Belsac association

Composition

Major Components

Gollaher extremely gravelly loam, 15 to 50 percent slopes--70 percent
 Belsac very gravelly loam, 30 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Typic Haploxerolls, loamy-skeletal, mixed, frigid very gravelly loam, 4 to 15 percent slopes--8 percent

Inclusion 2: Typic Calcixerolls, loamy-skeletal, carbonatic, frigid very gravelly silt loam, 30 to 50 percent slopes--1 percent

Inclusion 3: Aridic Calcixerolls, loamy-skeletal, carbonatic, frigid very gravelly loam, 30 to 50 percent slopes--1 percent

Map Unit Setting

Landscape position: Mountains

Gollaher--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Belsac--Landform: Mountains; geomorphic position: backslope; shape of slope: concave

Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: lower; shape of slope: concave

Inclusion 2--Landform: Mountains; geomorphic position: backslope

Inclusion 3--Landform: Mountains; geomorphic position: backslope

Major Component Description**Gollaher Series**

Elevation: 6,100 to 8,200 feet

Precipitation: About 14 inches

Air temperature: About 44 degrees

Frost-free season: About 80 days

Surface rock fragments: 5 percent cobbles; 60 percent gravel

Surface layer texture: Extremely gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Belsac Series

Elevation: 6,100 to 8,200 feet

Precipitation: About 16 inches

Air temperature: About 42 degrees

Frost-free season: About 65 days

Surface rock fragments: 5 percent cobbles; 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Dominant Present Vegetation

Gollaher: Thurber needlegrass, black sagebrush, bluebunch wheatgrass

Belsac: Idaho fescue, mountain big sagebrush, mountain brome, snowberry

Inclusion 1: Idaho fescue, bluebunch wheatgrass, low sagebrush

Inclusion 2: Idaho fescue, black sagebrush

Inclusion 3: Thurber needlegrass, black sagebrush, bluebunch wheatgrass

Ecological Site

Gollaher: 025XY057NV

Belsac: 025XY004NV

Inclusion 1: 025XY017NV

Inclusion 2: 024XY042NV

Inclusion 3: 024XY031NV

151--Hopeka-Amene-Rock outcrop association**Composition****Major Components**

Hopeka very gravelly loam, 30 to 50 percent slopes--45 percent

Amene very gravelly silt loam, 30 to 50 percent slopes--20 percent

Rock outcrop--20 percent

Contrasting Inclusions

Inclusion 1: Aridic Haploxerolls, loamy-skeletal, mixed, frigid very gravelly loam, 30 to 50 percent slopes--5 percent

Inclusion 2: Aridic Calcixerolls, loamy-skeletal, carbonatic, frigid gravelly loam, 15 to 30 percent slopes--5 percent

Inclusion 3: Aridic Calcixerolls, loamy-skeletal, mixed, frigid very gravelly silt loam, 30 to 50 percent slopes--3 percent

Inclusion 4: Gollaher very cobbly loam, 15 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains

Hopeka--Landform: Mountains; geomorphic position: summit

Amene--Landform: Mountains; geomorphic position: backslope; shape of slope: convex

Rock outcrop--Landform: Mountains

Inclusion 1--Landform: Mountains; geomorphic position: backslope; aspect: south

Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: lower; shape of slope: concave

Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: upper; shape of slope: concave

Inclusion 4--Landform: Mountains; geomorphic position: summit

Major Component Description

Hopeka Series

Elevation: 6,400 to 7,500 feet
 Precipitation: About 12 inches
 Air temperature: About 43 degrees
 Frost-free season: About 90 days
 Surface rock fragments: 5 percent cobbles; 60 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Amene Series

Elevation: 6,400 to 7,500 feet
 Precipitation: About 14 inches
 Air temperature: About 44 degrees
 Frost-free season: About 80 days
 Surface rock fragments: 2 percent cobbles; 30 percent gravel
 Surface layer texture: Very gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Residuum derived from limestone and dolomite

Rock outcrop Miscellaneous Area

Elevation: 6,400 to 7,500 feet

Dominant Present Vegetation

Hopeka: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon
 Amene: Idaho fescue, Utah serviceberry, bluebunch wheatgrass
 Rock outcrop: None
 Inclusion 1: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
 Inclusion 2: Idaho fescue, basin big sagebrush, bluebunch wheatgrass
 Inclusion 3: Mountain big sagebrush
 Inclusion 4: Thurber needlegrass, black sagebrush, bluebunch wheatgrass

Ecological Site

Hopeka: 028BY060NV
 Amene: 025XY042NV
 Rock outcrop: None
 Inclusion 1: 025XY009NV
 Inclusion 2: 025XY027NV
 Inclusion 3: 025XY012NV
 Inclusion 4: 025XY057NV

154--Hopeka-Tecomar association

Composition

Major Components

Hopeka very gravelly loam, 30 to 75 percent slopes--65 percent
 Tecomar extremely cobbly silt loam, 30 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--8 percent
 Inclusion 2: Amtoft extremely gravelly loam, 30 to 50 percent slopes--5 percent
 Inclusion 3: Cavehill very gravelly silt loam, 15 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains

Hopeka--Landform: Mountains; geomorphic position: summit

Tecomar--Landform: Mountains; geomorphic position: backslope

Inclusion 1--Landform: Mountains; geomorphic position: summit

Inclusion 2--Landform: Mountains; geomorphic position: backslope

Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: north

Major Component Description

Hopeka Series

Elevation: 5,400 to 8,100 feet
 Precipitation: About 12 inches
 Air temperature: About 43 degrees
 Frost-free season: About 90 days
 Surface rock fragments: 5 percent cobbles; 60 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Tecomar Series

Elevation: 5,400 to 8,100 feet
 Precipitation: About 12 inches
 Air temperature: About 46 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 20 percent cobbles; 40 percent gravel
 Surface layer texture: Extremely cobbly silt loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Hopeka: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Tecomar: Thurber needlegrass, black sagebrush, bluebunch wheatgrass

Inclusion 1: None

Inclusion 2: Thurber needlegrass, black sagebrush, bluebunch wheatgrass

Inclusion 3: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush, singleleaf pinyon

Ecological Site

Hopeka: 028BY060NV

Tecomar: 028BY006NV

Inclusion 1: None

Inclusion 2: 025XY057NV

Inclusion 3: 028BY058NV

160--Saltair-Kawich association***Composition*****Major Components**

Saltair silt loam, 0 to 2 percent slopes--70 percent

Kawich fine sand, 4 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Typic Torriorthents, loamy-skeletal, mixed (calcareous), mesic sandy loam, 0 to 4 percent slopes--5 percent

Inclusion 2: Ragtown silt loam, 2 to 4 percent slopes--4 percent

Inclusion 3: Playas, 0 to 2 percent slopes--3 percent

Inclusion 4: Benin silty clay loam, 0 to 2 percent slopes--3 percent

Map Unit Setting

Landscape position: Intermontane basins

Saltair--Landform: Lake plains

Kawich--Landform: Dunes

Inclusion 1--Landform: Fan skirts

Inclusion 2--Landform: Lake plains

Inclusion 3--Landform: Lake plains

Inclusion 4--Landform: Lake plains

Major Component Description**Saltair Series**

Elevation: 4,300 to 4,400 feet

Precipitation: About 6 inches

Air temperature: About 52 degrees

Frost-free season: About 135 days

Surface layer texture: Silt loam

Drainage class: Very poorly drained

Dominant parent material: Lacustrine sediments derived from volcanic rocks

Kawich Series

Elevation: 4,300 to 4,400 feet

Precipitation: About 6 inches

Air temperature: About 53 degrees

Frost-free season: About 130 days

Surface rock fragments: 5 percent gravel

Surface layer texture: Fine sand

Drainage class: Excessively drained

Dominant parent material: Eolian sand

Dominant Present Vegetation

Saltair: Inland saltgrass, iodinebush

Kawich: Indian ricegrass, black greasewood, shadscale, thickspike wheatgrass

Inclusion 1: Indian ricegrass, sickle saltbush, western wheatgrass

Inclusion 2: Bottlebrush squirreltail, gray molly kochia, sickle saltbush

Inclusion 3: None

Inclusion 4: Alkali sacaton, black greasewood, inland saltgrass

Ecological Site

Saltair: 028AY009NV

Kawich: 028BY021NV

Inclusion 1: 028AY033NV

Inclusion 2: 028AY020NV

Inclusion 3: None

Inclusion 4: 028BY020NV

161--Saltair-Playas association***Composition*****Major Components**

Saltair silt loam, 0 to 2 percent slopes--65 percent

Playas silty clay, 0 to 1 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Tooele silt loam, 2 to 4 percent slopes--8 percent

Inclusion 2: Typic Halaquepts, fine-silty, mixed (calcareous), mesic silty clay loam, 0 to 2 percent slopes--5 percent

Inclusion 3: Typic Halaquepts, fine-silty, mixed (calcareous), mesic silty clay, 0 to 1 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins

Saltair--Landform: Lake plains

Playas--Landform: Lake plains
 Inclusion 1--Landform: Lake plains
 Inclusion 2--Landform: Lake plains
 Inclusion 3--Landform: Lake plains

Major Component Description

Saltair Series

Elevation: 4,200 to 4,300 feet
 Precipitation: About 6 inches
 Air temperature: About 52 degrees
 Frost-free season: About 135 days
 Surface layer texture: Silt loam
 Drainage class: Very poorly drained
 Dominant parent material: Lacustrine sediments derived from volcanic rocks

Playas Miscellaneous Area

Elevation: 4,200 to 4,300 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Very poorly drained

Dominant Present Vegetation

Saltair: Inland saltgrass, iodinebush
 Playas: None
 Inclusion 1: Black greasewood, bottlebrush squirreltail, shadscale
 Inclusion 2: Inland saltgrass
 Inclusion 3: Cattail

Ecological Site

Saltair: 028AY009NV
 Playas: None
 Inclusion 1: 028BY074NV
 Inclusion 2: 028AY046NV
 Inclusion 3: 028BY044NV

171--Loray-Gravier-Toano association

Composition

Major Components

Loray gravelly sandy loam, 2 to 8 percent slopes--40 percent
 Gravier very gravelly sandy loam, 2 to 8 percent slopes--30 percent
 Toano very fine sandy loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Izamatch gravelly sandy loam, 2 to 8 percent slopes--5 percent

Inclusion 2: Xeric Torriorthents very gravelly sandy loam, 8 to 30 percent slopes--4 percent
 Inclusion 3: Luning gravelly loamy sand, 2 to 8 percent slopes--3 percent
 Inclusion 4: Katelana silt loam, 0 to 2 percent slopes--3 percent

Map Unit Setting

Landscape position: Intermontane basins
 Loray--Landform: Barrier beaches
 Gravier--Landform: Barrier beaches
 Toano--Landform: Lagoons
 Inclusion 1--Landform: Barrier beaches
 Inclusion 2--Landform: Spits
 Inclusion 3--Landform: Spits
 Inclusion 4--Landform: Lagoons

Major Component Description

Loray Series

Elevation: 4,400 to 5,200 feet
 Precipitation: About 6 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Gravier Series

Elevation: 4,400 to 5,200 feet
 Precipitation: About 6 inches
 Air temperature: About 50 degrees
 Frost-free season: About 115 days
 Surface rock fragments: 45 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Toano Series

Elevation: 4,400 to 5,200 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 115 days
 Surface layer texture: Very fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Loray: Indian ricegrass, bud sagebrush, galleta, shadscale

Gravier: Indian ricegrass, galleta, winterfat
 Toano: Indian ricegrass, winterfat
 Inclusion 1: Indian ricegrass, galleta, shadscale
 Inclusion 2: Indian ricegrass, black sagebrush, galleta, needleandthread
 Inclusion 3: Indian ricegrass, galleta, horsebrush, shadscale
 Inclusion 4: Black greasewood, bottlebrush squirreltail, shadscale

Ecological Site

Loray: 028BY063NV
 Gravier: 028AY002NV
 Toano: 028AY030NV
 Inclusion 1: 028AY018NV
 Inclusion 2: 028AY004NV
 Inclusion 3: 028AY014NV
 Inclusion 4: 028BY074NV

173--Cliffdown-Armespan-Izamatch association

Composition

Major Components

Cliffdown very gravelly sandy loam, 2 to 4 percent slopes--45 percent
 Armespan very gravelly sandy loam, 2 to 8 percent slopes--25 percent
 Izamatch very gravelly sandy loam, 2 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Kyler very gravelly sandy loam, 2 to 8 percent slopes--5 percent
 Inclusion 2: Theriot very gravelly sandy loam, 2 to 8 percent slopes--5 percent
 Inclusion 3: Gravier very gravelly fine sandy loam, 2 to 4 percent slopes--3 percent
 Inclusion 4: Typic Torriorthents, sandy-skeletal, mixed, mesic very gravelly sand, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
 Cliffdown--Landform: Barrier beaches
 Armespan--Landform: Barrier beaches
 Izamatch--Landform: Barrier beaches; position on slope: upper
 Inclusion 1--Landform: Pediments
 Inclusion 2--Landform: Pediments
 Inclusion 3--Landform: Barrier beaches

Inclusion 4--Landform: Drainageways

Major Component Description

Cliffdown Series

Elevation: 4,200 to 5,000 feet
 Precipitation: About 6 inches
 Air temperature: About 52 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 5 percent cobbles; 35 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from mixed rocks

Armespan Series

Elevation: 4,200 to 5,000 feet
 Precipitation: About 8 inches
 Air temperature: About 52 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Izamatch Series

Elevation: 4,800 to 5,200 feet
 Precipitation: About 6 inches
 Air temperature: About 52 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 50 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Cliffdown: Indian ricegrass, galleta, shadscale
 Armespan: Indian ricegrass, black sagebrush, galleta, needleandthread
 Izamatch: Indian ricegrass, galleta, shadscale
 Inclusion 1: Indian ricegrass, black sagebrush, galleta, needleandthread
 Inclusion 2: Indian ricegrass, black sagebrush, needleandthread, spiny hopsage
 Inclusion 3: Indian ricegrass, galleta, winterfat
 Inclusion 4: Indian ricegrass, fourwing saltbush, spiny hopsage

Ecological Site

Cliffdown: 028AY018NV

Armespan: 028AY004NV

Izamatch: 028AY014NV

Inclusion 1: 028AY004NV

Inclusion 2: 028AY047NV

Inclusion 3: 028AY002NV

Inclusion 4: 028AY037NV

174--Wintermute-Linoyer-Okan association

Composition

Major Components

Wintermute gravelly silt loam, 0 to 4 percent slopes--55 percent

Linoyer silt loam, 0 to 4 percent slopes--20 percent

Okan sandy loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Xerollic Durorthids, sandy-skeletal, mixed, mesic, shallow gravelly sandy loam, 2 to 8 percent slopes--7 percent

Inclusion 2: Gravier gravelly loam, 2 to 8 percent slopes--3 percent

Map Unit Setting

Landscape position: Intermontane basins

Wintermute--Landform: Barrier beaches

Linoyer--Landform: Drainageways

Okan--Landform: Drainageways

Inclusion 1--Landform: Spits

Inclusion 2--Landform: Barrier beaches

Major Component Description

Wintermute Series

Elevation: 5,700 to 6,200 feet

Precipitation: About 7 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Linoyer Series

Elevation: 5,700 to 6,200 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Okan Series

Elevation: 5,700 to 6,200 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Wintermute: Indian ricegrass, bud sagebrush, shadscale, winterfat

Linoyer: Indian ricegrass, winterfat

Okan: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Inclusion 1: Indian ricegrass, black sagebrush, needleandthread

Inclusion 2: Indian ricegrass, winterfat

Ecological Site

Wintermute: 028BY075NV

Linoyer: 028BY013NV

Okan: 028BY052NV

Inclusion 1: 028BY011NV

Inclusion 2: 028BY084NV

175--Loray-Wintermute association

Composition

Major Components

Loray gravelly sandy loam, 2 to 4 percent slopes--70 percent

Wintermute gravelly silt loam, 2 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Pyrat gravelly sandy loam, 2 to 4 percent slopes--5 percent

Inclusion 2: Automal gravelly loam, 2 to 4 percent slopes--5 percent

Inclusion 3: Sheffit silt loam, 2 to 4 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins

Loray--Landform: Barrier beaches

Wintermute--Landform: Barrier beaches

Inclusion 1--Landform: Barrier beaches

Inclusion 2--Landform: Drainageways

Inclusion 3--Landform: Lagoons

Major Component Description**Loray Series**

Elevation: 5,700 to 6,500 feet
 Precipitation: About 6 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Wintermute Series

Elevation: 5,700 to 6,500 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Loray: Indian ricegrass, bud sagebrush, shadscale
 Wintermute: Indian ricegrass, bud sagebrush, shadscale, winterfat
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 2: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 3: Basin wildrye, big sagebrush, black greasewood

Ecological Site

Loray: 028AY012NV
 Wintermute: 028BY075NV
 Inclusion 1: 028BY010NV
 Inclusion 2: 028BY011NV
 Inclusion 3: 028BY028NV

176--Zerk-Loray association**Composition****Major Components**

Loray gravelly sandy loam, 0 to 4 percent slopes--40 percent
 Zerk gravelly loam, 0 to 4 percent slopes--30 percent
 Zerk gravelly fine sandy loam, 0 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Linoyer silt loam, 0 to 2 percent slopes--5 percent

Inclusion 2: Katelana silt loam, 0 to 2 percent slopes--4 percent
 Inclusion 3: Toano silt loam, 0 to 2 percent slopes--1 percent
 Inclusion 4: Okan gravelly sandy loam, 0 to 4 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
 Loray--Landform: Barrier beaches
 Zerk--Landform: Barrier beaches
 Zerk--Landform: Barrier beaches
 Inclusion 1--Landform: Lagoons
 Inclusion 2--Landform: Lagoons
 Inclusion 3--Landform: Barrier beaches
 Inclusion 4--Landform: Drainageways

Major Component Description**Loray Series**

Elevation: 5,600 to 5,800 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Zerk Series

Elevation: 5,600 to 5,800 feet
 Precipitation: About 6 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Zerk Series

Elevation: 5,600 to 5,800 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Loray: Indian ricegrass, winterfat
 Zerk: Indian ricegrass, bud sagebrush, shadscale

Zerk: Indian ricegrass, bud sagebrush, shadscale, winterfat
 Inclusion 1: Indian ricegrass, winterfat
 Inclusion 2: Bottlebrush squirreltail, shadscale
 Inclusion 3: Indian ricegrass, sickle saltbush, western wheatgrass
 Inclusion 4: Indian ricegrass, Wyoming big sagebrush, needleandthread

Ecological Site

Loray: 028BY012NV
 Zerk: 028BY084NV
 Zerk: 028AY075NV
 Inclusion 1: 028BY013NV
 Inclusion 2: 028BY073NV
 Inclusion 3: 028BY047NV
 Inclusion 4: 028BY010NV

Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dewar Series

Elevation: 5,800 to 6,400 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 25 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

181--Peeko-Dewar association

Composition

Major Components

Peeko gravelly loam, 2 to 8 percent slopes--40 percent
 Dewar gravelly silt loam, 2 to 8 percent slopes--25 percent
 Peeko gravelly loam, 15 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Enko sandy loam, 2 to 8 percent slopes--9 percent
 Inclusion 2: Xeric Torriorthents gravelly sandy loam, 15 to 50 percent slopes--3 percent
 Inclusion 3: Chiara silt loam, 2 to 8 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Peeko--Landform: Fan remnants; geomorphic position: summit
 Dewar--Landform: Fan remnants; geomorphic position: summit
 Peeko--Landform: Fan remnants; geomorphic position: backslope
 Inclusion 1--Landform: Inset fans
 Inclusion 2--Landform: Pediments; geomorphic position: backslope
 Inclusion 3--Landform: Fan remnants; geomorphic position: summit

Major Component Description

Peeko Series

Elevation: 5,800 to 6,400 feet

Peeko Series

Elevation: 5,800 to 6,400 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Peeko: Indian ricegrass, Thurber needlegrass, black sagebrush
 Dewar: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Peeko: Indian ricegrass, Thurber needlegrass, black sagebrush
 Inclusion 1: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, black sagebrush
 Inclusion 3: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Ecological Site

Peeko: 024XY030NV
 Dewar: 025XY019NV
 Peeko: 024XY030NV
 Inclusion 1: 025XY019NV
 Inclusion 2: 025XY025NV
 Inclusion 3: 025XY019NV

182--Peeko-Gance association***Composition*****Major Components**

Peeko silt loam, 4 to 15 percent slopes--45 percent
 Peeko silt loam, 15 to 30 percent slopes--25 percent
 Gance very gravelly loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Chiara silt loam, 2 to 8 percent slopes--5 percent
 Inclusion 2: Izar very gravelly loam, 2 to 8 percent slopes--5 percent
 Inclusion 3: Aridic Argixerolls, fine-loamy, mixed, mesic very gravelly loam, 2 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts

Peeko--Landform: Fan remnants; geomorphic position: summit

Peeko--Landform: Fan remnants; geomorphic position: backslope; shape of slope: convex

Gance--Landform: Fan remnants; geomorphic position: summit

Inclusion 1--Landform: Fan remnants; geomorphic position: summit

Inclusion 2--Landform: Pediments; geomorphic position: backslope

Inclusion 3--Landform: Fan remnants; geomorphic position: summit; shape of slope: concave

Major Component Description**Peeko Series**

Elevation: 5,700 to 6,400 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Peeko Series

Elevation: 5,700 to 6,400 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Gance Series

Elevation: 5,700 to 6,400 feet
 Precipitation: About 9 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Peeko: Indian ricegrass, Thurber needlegrass, black sagebrush

Peeko: Indian ricegrass, Thurber needlegrass, black sagebrush

Gance: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Inclusion 1: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Inclusion 2: Indian ricegrass, Thurber needlegrass, black sagebrush

Inclusion 3: Thurber needlegrass, basin big sagebrush, bluebunch wheatgrass

Ecological Site

Peeko: 024XY030NV

Peeko: 024XY030NV

Gance: 025XY019NV

Inclusion 1: 025XY019NV

Inclusion 2: 024XY030NV

Inclusion 3: 025XY014NV

183--Peeko-Enko-Izar association***Composition*****Major Components**

Peeko gravelly loam, 4 to 15 percent slopes--50 percent
 Enko fine sandy loam, 4 to 15 percent slopes--20 percent
 Izar very gravelly loam, 8 to 30 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Kzin very gravelly loam, 15 to 50 percent slopes--8 percent

Inclusion 2: Hundraw very gravelly loam, 8 to 15 percent slopes--7 percent

Map Unit Setting

Landscape position: Hills and intermontane basins

Peeko--Landform: Fan remnants; geomorphic position: summit

Enko--Landform: Inset fans
 Izar--Landform: Pediments; geomorphic position: backslope
 Inclusion 1--Landform: Pediments; geomorphic position: backslope; position on slope: upper
 Inclusion 2--Landform: Pediments; geomorphic position: backslope

Major Component Description

Peeko Series

Elevation: 5,800 to 6,500 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Enko Series

Elevation: 5,800 to 6,500 feet
 Precipitation: About 9 inches
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Izar Series

Elevation: 5,800 to 6,500 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Very gravelly loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Peeko: Indian ricegrass, Thurber needlegrass, black sagebrush
 Enko: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Izar: Indian ricegrass, Thurber needlegrass, black sagebrush
 Inclusion 1: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon
 Inclusion 2: Thurber needlegrass, Utah juniper, black sagebrush, bluebunch wheatgrass

Ecological Site

Peeko: 024XY030NV
 Enko: 025XY019NV

Izar: 024XY030NV
 Inclusion 1: 028BY060NV
 Inclusion 2: 025XY060NV

185--Peeko-Chiara association

Composition

Major Components

Peeko silt loam, 2 to 8 percent slopes--35 percent
 Peeko silt loam, 8 to 15 percent slopes--35 percent
 Chiara silt loam, 4 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Haploxerollic Durorthids, loamy-skeletal, mixed, mesic very gravelly loam, 15 to 50 percent slopes--9 percent
 Inclusion 2: Dewar silt loam, 4 to 15 percent slopes--3 percent
 Inclusion 3: Gance gravelly loam, 2 to 8 percent slopes--2 percent
 Inclusion 4: Hundraw very gravelly loam, 15 to 50 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Peeko--Landform: Fan remnants; geomorphic position: summit
 Peeko--Landform: Fan remnants; geomorphic position: summit
 Chiara--Landform: Fan remnants; geomorphic position: summit
 Inclusion 1--Landform: Fan remnants; geomorphic position: backslope; aspect: north
 Inclusion 2--Landform: Fan remnants; geomorphic position: backslope
 Inclusion 3--Landform: Fan remnants; geomorphic position: summit
 Inclusion 4--Landform: Pediments; geomorphic position: backslope

Major Component Description

Peeko Series

Elevation: 5,800 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Peeko Series

Elevation: 5,800 to 6,200 feet

Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Chiara Series

Elevation: 5,800 to 6,200 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Peeko: Indian ricegrass, Thurber needlegrass, black sagebrush
 Peeko: Indian ricegrass, Thurber needlegrass, black sagebrush
 Chiara: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Inclusion 1: Thurber needlegrass, black sagebrush, bluebunch wheatgrass
 Inclusion 2: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Inclusion 3: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Inclusion 4: Thurber needlegrass, Utah juniper, black sagebrush, bluebunch wheatgrass

Ecological Site

Peeko: 024XY030NV
 Peeko: 024XY030NV
 Chiara: 025XY019NV
 Inclusion 1: 024XY031NV
 Inclusion 2: 025XY019NV
 Inclusion 3: 025XY019NV
 Inclusion 4: 025XY060NV

186--Palinor-Pharo-Hundraw association

Composition

Major Components

Palinor gravelly loam, 2 to 8 percent slopes--55 percent
 Pharo gravelly loam, 8 to 30 percent slopes--15 percent
 Hundraw gravelly fine sandy loam, 8 to 30 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Pyrat gravelly sandy loam, 2 to 8 percent slopes--5 percent
 Inclusion 2: Wintermute gravelly silt loam, 2 to 8 percent slopes--5 percent
 Inclusion 3: Zerk gravelly loamy sand, 2 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Palinor--Landform: Fan remnants; geomorphic position: summit
 Pharo--Landform: Fan remnants; geomorphic position: backslope
 Hundraw--Landform: Pediments; geomorphic position: backslope
 Inclusion 1--Landform: Inset fans
 Inclusion 2--Landform: Fan remnants; position on slope: lower
 Inclusion 3--Landform: Fan remnants; position on slope: lower

Major Component Description

Palinor Series

Elevation: 5,900 to 7,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 30 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Pharo Series

Elevation: 5,900 to 7,000 feet
 Precipitation: About 12 inches
 Air temperature: About 46 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Hundraw Series

Elevation: 5,900 to 7,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 25 percent cobbles; 30 percent gravel
 Surface layer texture: Gravelly fine sandy loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium
derived from volcanic rocks, loess and volcanic ash

Dominant Present Vegetation

Palinor: Indian ricegrass, black sagebrush,
needleandthread

Pharo: Indian ricegrass, black sagebrush, bluebunch
wheatgrass

Hundraw: Thurber needlegrass, Utah juniper, black
sagebrush, bluebunch wheatgrass

Inclusion 1: Indian ricegrass, Wyoming big sagebrush,
needleandthread

Inclusion 2: Indian ricegrass, bud sagebrush,
shadscale, winterfat

Inclusion 3: Indian ricegrass, winterfat

Ecological Site

Palinor: 028BY011NV

Pharo: 028BY006NV

Hundraw: 025XY060NV

Inclusion 1: 028BY010NV

Inclusion 2: 028BY075NV

Inclusion 3: 028BY084NV

187--Peeko-Izar association

Composition

Major Components

Peeko gravelly loam, 4 to 15 percent slopes--45
percent

Izar very gravelly loam, 8 to 30 percent slopes--25
percent

Izar very gravelly loam, 15 to 50 percent slopes--15
percent

Contrasting Inclusions

Inclusion 1: Pyrat gravelly sandy loam, 4 to 15 percent
slopes--9 percent

Inclusion 2: Wintermute gravelly silt loam, 4 to 15
percent slopes--2 percent

Inclusion 3: Hundraw very gravelly loam, 8 to 30
percent slopes--2 percent

Inclusion 4: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Hills and intermontane basins

Peeko--Landform: Fan remnants; geomorphic position:
summit

Izar--Landform: Fan remnants; geomorphic position:
backslope

Izar--Landform: Fan remnants; geomorphic position:
backslope

Inclusion 1--Landform: Inset fans

Inclusion 2--Landform: Fan remnants; position on
slope: lower

Inclusion 3--Landform: Pediments; geomorphic
position: backslope

Inclusion 4--Landform: Pediments; geomorphic
position: backslope

Major Component Description

Peeko Series

Elevation: 6,200 to 6,900 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 10 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed
rocks, loess and volcanic ash

Izar Series

Elevation: 6,200 to 6,900 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Very gravelly loam

Drainage class: Somewhat excessively drained

Dominant parent material: Residuum and colluvium
derived from tuffaceous rocks

Izar Series

Elevation: 6,200 to 6,900 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Very gravelly loam

Drainage class: Somewhat excessively drained

Dominant parent material: Residuum and colluvium
derived from tuffaceous rocks

Dominant Present Vegetation

Peeko: Indian ricegrass, black sagebrush,
needleandthread

Izar: Indian ricegrass, Utah juniper, black sagebrush,
needleandthread

Izar: Indian ricegrass, black sagebrush,
needleandthread

Inclusion 1: Indian ricegrass, Wyoming big sagebrush,
needleandthread

Inclusion 2: Indian ricegrass, bud sagebrush,
shadscale, winterfat

Inclusion 3: Utah juniper, black sagebrush, bluebunch
wheatgrass, singleleaf pinyon

Inclusion 4: None

Ecological Site

Peeko: 028BY011NV
 Izar: 028BY083NV
 Izar: 028BY016NV
 Inclusion 1: 028BY010NV
 Inclusion 2: 028BY075NV
 Inclusion 3: 028BY060NV
 Inclusion 4: None

188--Palinor-Automal-Izar association***Composition*****Major Components**

Palinor very gravelly loam, 4 to 15 percent slopes--50 percent
 Automal gravelly silt loam, 15 to 50 percent slopes--15 percent
 Izar very gravelly loam, 8 to 30 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Pharo gravelly loam, 4 to 15 percent slopes--5 percent
 Inclusion 2: Jericho gravelly sandy loam, 2 to 8 percent slopes--5 percent
 Inclusion 3: Wintermute gravelly silt loam, 2 to 8 percent slopes--8 percent
 Inclusion 4: Hundraw very gravelly loam, 8 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Palinor--Landform: Fan remnants; geomorphic position: summit
 Automal--Landform: Fan remnants; geomorphic position: backslope
 Izar--Landform: Pediments; geomorphic position: backslope
 Inclusion 1--Landform: Fan remnants; geomorphic position: summit; position on slope: upper
 Inclusion 2--Landform: Fan remnants; geomorphic position: summit
 Inclusion 3--Landform: Fan remnants; geomorphic position: summit; position on slope: lower
 Inclusion 4--Landform: Pediments; geomorphic position: backslope; position on slope: upper

Major Component Description**Palinor Series**

Elevation: 6,200 to 7,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days

Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Automal Series

Elevation: 6,200 to 7,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 35 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Izar Series

Elevation: 6,200 to 7,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Very gravelly loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Palinor: Indian ricegrass, black sagebrush, needleandthread
 Automal: Indian ricegrass, black sagebrush, needleandthread
 Izar: Indian ricegrass, Utah juniper, black sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 3: Indian ricegrass, bud sagebrush, shadscale, winterfat
 Inclusion 4: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Ecological Site

Palinor: 028BY011NV
 Automal: 028BY016NV
 Izar: 028BY083NV
 Inclusion 1: 028BY006NV
 Inclusion 2: 028BY010NV
 Inclusion 3: 028BY075NV
 Inclusion 4: 028BY060NV

192--Hutchley-Simon association***Composition*****Major Components**

Hutchley very gravelly loam, 8 to 30 percent slopes--60 percent

Simon loam, 15 to 50 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Haunchee gravelly loam, 15 to 50 percent slopes--6 percent

Inclusion 2: Hardzem channery loam, 15 to 50 percent slopes--5 percent

Inclusion 3: Rock outcrop--4 percent

Map Unit Setting

Landscape position: Mountains

Hutchley--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Simon--Landform: Mountains; geomorphic position: backslope; position on slope: upper; shape of slope: concave

Inclusion 1--Landform: Mountains; geomorphic position: backslope

Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: north

Inclusion 3--Landform: Mountains; geomorphic position: backslope

Major Component Description**Hutchley Series**

Elevation: 6,800 to 8,200 feet

Precipitation: About 14 inches

Air temperature: About 43 degrees

Frost-free season: About 65 days

Surface rock fragments: 10 percent cobbles; 35 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks

Simon Series

Elevation: 6,800 to 8,200 feet

Precipitation: About 11 inches

Frost-free season: About 95 days

Surface layer texture: Loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Hutchley: Thurber needlegrass, bluebunch wheatgrass, low sagebrush

Simon: Idaho fescue, basin big sagebrush, bluebunch wheatgrass

Inclusion 1: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush

Inclusion 2: Bluebunch wheatgrass, limber pine, mountain big sagebrush, white fir

Inclusion 3: None

Ecological Site

Hutchley: 028BY034NV

Simon: 025XY027NV

Inclusion 1: 028BY043NV

Inclusion 2: 028BY063NV

Inclusion 3: None

201--Tecomar-Hopeka-Rock outcrop association***Composition*****Major Components**

Tecomar extremely stony silt loam, 15 to 50 percent slopes--50 percent

Hopeka very gravelly loam, 30 to 50 percent slopes--20 percent

Rock outcrop--15 percent

Contrasting Inclusions

Inclusion 1: Amtoft extremely gravelly loam, 15 to 50 percent slopes--10 percent

Inclusion 2: Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic very gravelly loam, 2 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Mountains

Tecomar--Landform: Mountains; geomorphic position: backslope; aspect: south

Hopeka--Landform: Mountains; geomorphic position: summit

Rock outcrop--Landform: Mountains

Inclusion 1--Landform: Mountains; geomorphic position: backslope

Inclusion 2--Landform: Mountains; geomorphic position: summit

Major Component Description**Tecomar Series**

Elevation: 5,600 to 6,900 feet

Precipitation: About 12 inches

Air temperature: About 46 degrees

Frost-free season: About 100 days

Surface rock fragments: 5 percent cobbles; 40 percent gravel

Surface layer texture: Extremely stony silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium
derived from limestone and dolomite

Hopeka Series

Elevation: 5,600 to 6,900 feet

Precipitation: About 12 inches

Air temperature: About 43 degrees

Frost-free season: About 90 days

Surface rock fragments: 5 percent cobbles; 60 percent
gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium
derived from limestone and dolomite

Rock outcrop Miscellaneous Area

Elevation: 5,600 to 6,900 feet

Dominant Present Vegetation

Tecomar: Thurber needlegrass, black sagebrush,
bluebunch wheatgrass

Hopeka: Utah juniper, black sagebrush, bluebunch
wheatgrass, singleleaf pinyon

Rock outcrop: None

Inclusion 1: Thurber needlegrass, black sagebrush,
bluebunch wheatgrass

Inclusion 2: Indian ricegrass, black sagebrush,
bluebunch wheatgrass

Ecological Site

Tecomar: 024XY031NV

Hopeka: 028BY060NV

Rock outcrop: None

Inclusion 1: 025XY057NV

Inclusion 2: 028BY006NV

203--Tecomar-Pookaloo-Pharo association

Composition

Major Components

Tecomar extremely gravelly loam, 8 to 30 percent
slopes--40 percent

Pookaloo very gravelly loam, 8 to 30 percent slopes--30
percent

Pharo gravelly loam, 4 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Petrocalcic Palexerolls, loamy-skeletal,
carbonatic, mesic gravelly loam, 4 to 15 percent slopes--
10 percent

Inclusion 2: Aridic Calcixerolls, loamy-skeletal,

carbonatic, frigid very gravelly loam, 4 to 15 percent
slopes--4 percent

Inclusion 3: Aridic Haploxerolls, loamy-skeletal, mixed,
frigid very gravelly loam, 0 to 4 percent slopes--1
percent

Map Unit Setting

Landscape position: Hills and intermontane basins

Tecomar--Landform: Hills; geomorphic position:
backslope; aspect: south

Pookaloo--Landform: Hills; geomorphic position:
backslope; aspect: north

Pharo--Landform: Fan remnants

Inclusion 1--Landform: Fan remnants

Inclusion 2--Landform: Hills; geomorphic position:
backslope; shape of slope: concave

Inclusion 3--Landform: Drainageways

Major Component Description

Tecomar Series

Elevation: 6,800 to 7,700 feet

Precipitation: About 12 inches

Air temperature: About 46 degrees

Frost-free season: About 100 days

Surface rock fragments: 5 percent cobbles; 60 percent
gravel

Surface layer texture: Extremely gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium
derived from limestone and dolomite

Pookaloo Series

Elevation: 6,800 to 7,700 feet

Precipitation: About 12 inches

Air temperature: About 46 degrees

Frost-free season: About 100 days

Surface rock fragments: 50 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium
derived from limestone and dolomite

Pharo Series

Elevation: 6,300 to 6,800 feet

Precipitation: About 12 inches

Air temperature: About 46 degrees

Frost-free season: About 100 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Somewhat excessively drained

Dominant parent material: Alluvium derived from limestone
and dolomite

Dominant Present Vegetation

Tecomar: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Pookaloo: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Pharo: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Inclusion 1: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Inclusion 2: Indian ricegrass, bluebunch wheatgrass, mountain big sagebrush

Inclusion 3: Basin big sagebrush, basin wildrye, rubber rabbitbrush

Ecological Site

Tecomar: 028BY008NV

Pookaloo: 028BY060NV

Pharo: 028BY006NV

Inclusion 1: 028BY006NV

Inclusion 2: 028BY079NV

Inclusion 3: 028BY003NV

210--Mazuma-Hardhat-Loray association***Composition*****Major Components**

Mazuma silt loam, 0 to 4 percent slopes--40 percent

Hardhat silt loam, 2 to 8 percent slopes--30 percent

Loray gravelly sandy loam, 2 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Toano silt loam, 2 to 8 percent slopes--5 percent

Inclusion 2: Benin silty clay loam, 0 to 4 percent slopes--5 percent

Inclusion 3: Durorthidic Torriorthents, coarse-silty, mixed (calcareous), mesic silt loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins

Mazuma--Landform: Lake plains

Hardhat--Landform: Lake terraces

Loray--Landform: Barrier beaches

Inclusion 1--Landform: Drainageways

Inclusion 2--Landform: Lake plains

Inclusion 3--Landform: Lake plains

Major Component Description**Mazuma Series**

Elevation: 4,800 to 5,200 feet

Precipitation: About 6 inches

Air temperature: About 50 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Hardhat Series

Elevation: 4,800 to 5,200 feet

Precipitation: About 6 inches

Air temperature: About 49 degrees

Frost-free season: About 115 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Loray Series

Elevation: 4,800 to 5,200 feet

Precipitation: About 6 inches

Air temperature: About 50 degrees

Frost-free season: About 110 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Somewhat excessively drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Mazuma: Black greasewood, bottlebrush squirreltail, shadscale

Hardhat: Bottlebrush squirreltail, shadscale

Loray: Indian ricegrass, bud sagebrush, shadscale

Inclusion 1: Indian ricegrass, winterfat

Inclusion 2: Alkali sacaton, black greasewood, inland saltgrass

Inclusion 3: Indian ricegrass, black greasewood, spiny hopsage

Ecological Site

Mazuma: 028BY074NV

Hardhat: 028BY073NV

Loray: 028AY012NV

Inclusion 1: 028BY013NV

Inclusion 2: 028BY020NV

Inclusion 3: 028AY032NV

211--Valmy-Enko association***Composition*****Major Components**

Valmy silt loam, 0 to 2 percent slopes--55 percent

Enko fine sandy loam, 2 to 4 percent slopes--30 percent

Contrasting Inclusions

Inclusion 1: Oupico loam, 2 to 4 percent slopes--5 percent

Inclusion 2: Durorthidic Torriorthents, coarse-silty, mixed (calcareous), mesic silt loam, 0 to 2 percent slopes--4 percent

Inclusion 3: Durixerollic Camborthids, loamy-skeletal, mixed, mesic gravelly loam, 2 to 8 percent slopes--4 percent

Inclusion 4: Kelk silt loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Valmy--Landform: Fan skirts; position on slope: lower

Enko--Landform: Fan skirts; position on slope: upper

Inclusion 1--Landform: Fan remnants

Inclusion 2--Landform: Alluvial flats

Inclusion 3--Landform: Fan remnants

Inclusion 4--Landform: Inset fans

Major Component Description

Valmy Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 7 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Enko Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 9 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Fine sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Valmy: Basin big sagebrush, big sagebrush, black greasewood

Enko: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Inclusion 1: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Inclusion 2: Basin wildrye, black greasewood

Inclusion 3: Indian ricegrass, Thurber needlegrass, black sagebrush

Inclusion 4: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Ecological Site

Valmy: 024XY022NV

Enko: 025XY019NV

Inclusion 1: 025XY019NV

Inclusion 2: 024XY008NV

Inclusion 3: 024XY030NV

Inclusion 4: 025XY019NV

230--Zafod-Pyrat-Palinor association

Composition

Major Components

Zafod extremely stony loam, 8 to 30 percent slopes--40 percent

Pyrat very stony sandy loam, 8 to 30 percent slopes--25 percent

Palinor very gravelly loam, 15 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Aridic Argixerolls, loamy-skeletal, mixed, mesic extremely cobbly loam, 15 to 30 percent slopes--8 percent

Inclusion 2: Rubble land, 8 to 30 percent slopes--7 percent

Map Unit Setting

Landscape position: Fan piedmonts

Zafod--Landform: Fan remnants

Pyrat--Landform: Inset fans

Palinor--Landform: Fan remnants

Inclusion 1--Landform: Fan remnants

Inclusion 2--Landform: Fan remnants; position on slope: upper

Major Component Description

Zafod Series

Elevation: 4,900 to 6,200 feet

Precipitation: About 9 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 15 percent stones and boulders; 5 percent cobbles; 15 percent gravel

Surface layer texture: Extremely stony loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from granitic rocks

Pyrat Series

Elevation: 4,900 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 5 percent stones and boulders; 5 percent cobbles; 20 percent gravel
 Surface layer texture: Very stony sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Palinor Series

Elevation: 4,900 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Dominant Present Vegetation

Zafod: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
 Pyrat: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Palinor: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 1: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
 Inclusion 2: None

Ecological Site

Zafod: 028BY007NV
 Pyrat: 028BY010NV
 Palinor: 028BY011NV
 Inclusion 1: 028BY007NV
 Inclusion 2: None

231--Dacker-Nevador-Kelk association***Composition*****Major Components**

Dacker silt loam, 2 to 4 percent slopes--45 percent
 Nevador loam, 4 to 15 percent slopes--25 percent
 Kelk silt loam, 0 to 4 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Hunnton loam, 2 to 4 percent slopes--4 percent

Inclusion 2: Oupico loam, 2 to 4 percent slopes--3 percent
 Inclusion 3: Xerollic Camborthids, sandy-skeletal, mixed, mesic sandy loam, 0 to 8 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Dacker--Landform: Fan remnants; geomorphic position: summit
 Nevador--Landform: Fan remnants; geomorphic position: backslope
 Kelk--Landform: Inset fans
 Inclusion 1--Landform: Fan remnants; geomorphic position: summit
 Inclusion 2--Landform: Fan remnants
 Inclusion 3--Landform: Inset fans

Major Component Description**Dacker Series**

Elevation: 5,600 to 5,800 feet
 Precipitation: About 9 inches
 Air temperature: About 46 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 45 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Nevador Series

Elevation: 5,600 to 5,800 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Kelk Series

Elevation: 5,600 to 5,800 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Dacker: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Nevador: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Kelk: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Inclusion 1: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Inclusion 2: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Inclusion 3: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Ecological Site

Dacker: 025XY019NV

Nevador: 025XY019NV

Kelk: 025XY019NV

Inclusion 1: 025XY019NV

Inclusion 2: 025XY019NV

Inclusion 3: 025XY019NV

240--Hundraw-Cobre association***Composition*****Major Components**

Hundraw gravelly loam, 15 to 50 percent slopes--65 percent

Cobre silt loam, 4 to 15 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Xeric Torriorthents gravelly silty clay loam, 15 to 30 percent slopes--3 percent

Inclusion 2: Okan gravelly sandy loam, 2 to 8 percent slopes--3 percent

Inclusion 3: Peeko silt loam, 4 to 15 percent slopes--3 percent

Inclusion 4: Linoyer gravelly sandy loam, 0 to 4 percent slopes--1 percent

Map Unit Setting

Landscape position: Hills

Hundraw--Landform: Hills; geomorphic position: backslope

Cobre--Landform: Hills; geomorphic position: backslope; position on slope: lower

Inclusion 1--Landform: Hills; geomorphic position: backslope

Inclusion 2--Landform: Drainageways

Inclusion 3--Landform: Fan remnants

Inclusion 4--Landform: Drainageways

Major Component Description**Hundraw Series**

Elevation: 5,700 to 6,400 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 25 percent cobbles; 30 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks, loess and volcanic ash

Cobre Series

Elevation: 5,700 to 6,400 feet

Precipitation: About 9 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 10 percent gravel

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Hundraw: Indian ricegrass, Thurber needlegrass, black sagebrush

Cobre: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Inclusion 1: Indian ricegrass, Wyoming big sagebrush, black sagebrush

Inclusion 2: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Inclusion 3: Indian ricegrass, Thurber needlegrass, black sagebrush

Inclusion 4: Indian ricegrass, winterfat

Ecological Site

Hundraw: 024XY030NV

Cobre: 025XY019NV

Inclusion 1: 025XY025NV

Inclusion 2: 028BY052NV

Inclusion 3: 024XY030NV

Inclusion 4: 028BY013NV

241--Hundraw-Peeko-Kzin association***Composition*****Major Components**

Hundraw gravelly fine sandy loam, 4 to 15 percent slopes--50 percent

Peeko gravelly loam, 4 to 15 percent slopes--20 percent
 Kzin very gravelly loam, 8 to 30 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Automal very gravelly loam, 8 to 30 percent slopes--5 percent
 Inclusion 2: Tulase silty clay loam, 2 to 8 percent slopes--5 percent
 Inclusion 3: Pharo gravelly loam, 8 to 15 percent slopes--3 percent
 Inclusion 4: Izar very gravelly loam, 8 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
 Hundraw--Landform: Hills; geomorphic position: backslope
 Peeko--Landform: Fan remnants; geomorphic position: summit
 Kzin--Landform: Hills; geomorphic position: backslope
 Inclusion 1--Landform: Fan remnants; geomorphic position: backslope
 Inclusion 2--Landform: Inset fans
 Inclusion 3--Landform: Fan remnants; geomorphic position: summit; position on slope: upper
 Inclusion 4--Landform: Hills; geomorphic position: backslope

Major Component Description

Hundraw Series

Elevation: 5,600 to 6,500 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 25 percent cobbles; 30 percent gravel
 Surface layer texture: Gravelly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from volcanic rocks, loess and volcanic ash

Peeko Series

Elevation: 5,600 to 6,500 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Kzin Series

Elevation: 5,600 to 6,500 feet
 Precipitation: About 11 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 80 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum derived from sedimentary rocks

Dominant Present Vegetation

Hundraw: Indian ricegrass, black sagebrush, needleandthread
 Peeko: Indian ricegrass, black sagebrush, needleandthread
 Kzin: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon
 Inclusion 1: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat
 Inclusion 3: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Inclusion 4: Indian ricegrass, black sagebrush, needleandthread

Ecological Site

Hundraw: 028BY011NV
 Peeko: 028BY011NV
 Kzin: 028BY060NV
 Inclusion 1: 028BY011NV
 Inclusion 2: 028BY045NV
 Inclusion 3: 028BY006NV
 Inclusion 4: 028BY011NV

242--Cobre-Hundraw-Chiara association

Composition

Major Components

Cobre silt loam, 4 to 15 percent slopes--50 percent
 Hundraw gravelly fine sandy loam, 8 to 30 percent slopes--20 percent
 Chiara silt loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Pharo gravelly loam, 15 to 50 percent slopes--5 percent
 Inclusion 2: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic very gravelly silt loam, 2 to 8 percent slopes--5 percent
 Inclusion 3: Okan gravelly sandy loam, 2 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts

Cobre--Landform: Pediments; geomorphic position: backslope

Hundraw--Landform: Pediments; geomorphic position: backslope

Chiara--Landform: Fan remnants; geomorphic position: summit

Inclusion 1--Landform: Pediments; geomorphic position: backslope; position on slope: upper

Inclusion 2--Landform: Fan remnants; geomorphic position: backslope; position on slope: lower

Inclusion 3--Landform: Inset fans

Major Component Description**Cobre Series**

Elevation: 6,200 to 6,600 feet

Precipitation: About 9 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 10 percent gravel

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Hundraw Series

Elevation: 6,200 to 6,700 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 25 percent cobbles; 30 percent gravel

Surface layer texture: Gravelly fine sandy loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks, loess and volcanic ash

Chiara Series

Elevation: 6,200 to 6,700 feet

Precipitation: About 9 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Cobre: Indian ricegrass, Wyoming big sagebrush, needleandthread

Hundraw: Indian ricegrass, Utah juniper, black sagebrush, needleandthread

Chiara: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 1: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Inclusion 2: Indian ricegrass, Utah juniper, black sagebrush, needleandthread

Inclusion 3: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Ecological Site

Cobre: 028BY010NV

Hundraw: 028BY083NV

Chiara: 028BY010NV

Inclusion 1: 028BY006NV

Inclusion 2: 028BY083NV

Inclusion 3: 028BY052NV

244--Hundraw-Shabliss-Palinor association**Composition****Major Components**

Hundraw gravelly fine sandy loam, 4 to 15 percent slopes--40 percent

Shabliss gravelly fine sandy loam, 2 to 8 percent slopes--30 percent

Palinor gravelly loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Izar very gravelly loam, 8 to 30 percent slopes--5 percent

Inclusion 2: Oupico loam, 2 to 8 percent slopes--4 percent

Inclusion 3: Xerollic Camborthids, coarse-silty, mixed, mesic silt loam, 0 to 4 percent slopes--4 percent

Inclusion 4: Tulase silt loam, 0 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Hundraw--Landform: Pediments; geomorphic position: backslope

Shabliss--Landform: Fan remnants; geomorphic position: summit

Palinor--Landform: Fan remnants; geomorphic position: summit

Inclusion 1--Landform: Pediments; geomorphic position: backslope

Inclusion 2--Landform: Fan remnants; geomorphic position: summit

Inclusion 3--Landform: Inset fans

Inclusion 4--Landform: Inset fans

Major Component Description**Hundraw Series**

Elevation: 5,700 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 25 percent cobbles; 30 percent gravel
 Surface layer texture: Gravelly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from volcanic rocks, loess and volcanic ash

Shabliss Series

Elevation: 5,700 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Palinor Series

Elevation: 5,700 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 30 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Dominant Present Vegetation

Hundraw: Indian ricegrass, black sagebrush, needleandthread
 Shabliss: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Palinor: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, Utah juniper, black sagebrush, needleandthread
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 3: Indian ricegrass, bottlebrush squirreltail, shadscale
 Inclusion 4: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat

Ecological Site

Hundraw: 028BY011NV
 Shabliss: 028BY010NV
 Palinor: 028BY011NV
 Inclusion 1: 028BY083NV
 Inclusion 2: 028BY010NV
 Inclusion 3: 028BY009NV
 Inclusion 4: 028BY045NV

250--Izar-Holborn-Kzin association**Composition****Major Components**

Izar very gravelly loam, 15 to 50 percent slopes--50 percent
 Holborn gravelly loam, 8 to 30 percent slopes--20 percent
 Kzin very gravelly loam, 8 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Xeric Torriorthents gravelly loam, 2 to 4 percent slopes--6 percent
 Inclusion 2: Palinor very gravelly loam, 2 to 8 percent slopes--5 percent
 Inclusion 3: Xeric Torriorthents gravelly sandy loam, 30 to 75 percent slopes--3 percent
 Inclusion 4: Kelk silt loam, 2 to 4 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Izar--Landform: Pediments; geomorphic position: backslope
 Holborn--Landform: Pediments; geomorphic position: backslope; aspect: north
 Kzin--Landform: Pediments; geomorphic position: backslope; aspect: north
 Inclusion 1--Landform: Inset fans
 Inclusion 2--Landform: Partial ballenas; geomorphic position: summit
 Inclusion 3--Landform: Pediments; geomorphic position: backslope
 Inclusion 4--Landform: Inset fans

Major Component Description**Izar Series**

Elevation: 5,700 to 6,500 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees

Frost-free season: About 110 days
 Surface layer texture: Very gravelly loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Residuum and colluvium
 derived from tuffaceous rocks

Holborn Series

Elevation: 5,700 to 6,500 feet
 Precipitation: About 11 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 25 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from tuffaceous rocks

Kzin Series

Elevation: 5,700 to 6,500 feet
 Precipitation: About 11 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 80 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum derived from
 sedimentary rocks

Dominant Present Vegetation

Izar: Indian ricegrass, black sagebrush,
 needleandthread
 Holborn: Indian ricegrass, black sagebrush, bluebunch
 wheatgrass
 Kzin: Utah juniper, black sagebrush, bluebunch
 wheatgrass, singleleaf pinyon
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush,
 needleandthread
 Inclusion 2: Indian ricegrass, black sagebrush,
 needleandthread
 Inclusion 3: Indian ricegrass, Wyoming big sagebrush,
 black sagebrush
 Inclusion 4: Indian ricegrass, Wyoming big sagebrush,
 needleandthread

Ecological Site

Izar: 028BY011NV
 Holborn: 028BY006NV
 Kzin: 028BY060NV
 Inclusion 1: 028BY010NV
 Inclusion 2: 028BY011NV

Inclusion 3: 025XY025NV
 Inclusion 4: 028BY010NV

251--Izar-Palinor-Shabliss association

Composition

Major Components

Izar very gravelly loam, 4 to 15 percent slopes--45
 percent
 Palinor very gravelly loam, 2 to 8 percent slopes--25
 percent
 Shabliss gravelly fine sandy loam, 2 to 8 percent
 slopes--15 percent

Contrasting Inclusions

Inclusion 1: Izar very gravelly loam, 15 to 30 percent
 slopes--6 percent
 Inclusion 2: Wintermute gravelly silt loam, 2 to 8
 percent slopes--5 percent
 Inclusion 3: Xerollic Camborthids, coarse-silty, mixed,
 mesic silt loam, 0 to 4 percent slopes--3 percent
 Inclusion 4: Rock outcrop--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Izar--Landform: Pediments
 Palinor--Landform: Fan remnants
 Shabliss--Landform: Fan remnants
 Inclusion 1--Landform: Pediments; geomorphic
 position: backslope
 Inclusion 2--Landform: Fan remnants; position on
 slope: lower
 Inclusion 3--Landform: Inset fans
 Inclusion 4--Landform: Pediments; geomorphic
 position: backslope

Major Component Description

Izar Series

Elevation: 5,400 to 5,800 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Very gravelly loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Residuum and colluvium
 derived from tuffaceous rocks

Palinor Series

Elevation: 5,400 to 5,800 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Shabliss Series

Elevation: 5,400 to 5,800 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Izar: Indian ricegrass, black sagebrush, needleandthread
 Palino: Indian ricegrass, black sagebrush, needleandthread
 Shabliss: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, winterfat
 Inclusion 2: Indian ricegrass, bud sagebrush, shadscale, winterfat
 Inclusion 3: Indian ricegrass, bottlebrush squirreltail, shadscale
 Inclusion 4: None

Ecological Site

Izar: 028BY011NV
 Palino: 028BY011NV
 Shabliss: 028BY010NV
 Inclusion 1: 028BY018NV
 Inclusion 2: 028BY075NV
 Inclusion 3: 028BY009NV
 Inclusion 4: None

252--Izar-Hundraw-Okan association

Composition

Major Components

Izar very gravelly loam, 2 to 8 percent slopes--40 percent
 Hundraw gravelly fine sandy loam, 8 to 30 percent slopes--30 percent
 Okan sandy loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Tulasie silty clay loam, 0 to 4 percent slopes--5 percent
 Inclusion 2: Palino very gravelly sandy loam, 2 to 8 percent slopes--5 percent

Inclusion 3: Okan gravelly sandy loam, 2 to 8 percent slopes--3 percent
 Inclusion 4: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Hills
 Izar--Landform: Hills; geomorphic position: summit
 Hundraw--Landform: Hills; geomorphic position: backslope
 Okan--Landform: Drainageways
 Inclusion 1--Landform: Drainageways
 Inclusion 2--Landform: Fan remnants
 Inclusion 3--Landform: Drainageways
 Inclusion 4--Landform: Hills; geomorphic position: summit

Major Component Description

Izar Series

Elevation: 6,000 to 6,500 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Very gravelly loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Hundraw Series

Elevation: 6,000 to 6,500 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 25 percent cobbles; 30 percent gravel
 Surface layer texture: Gravelly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from volcanic rocks, loess and volcanic ash

Okan Series

Elevation: 6,000 to 6,500 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Izar: Indian ricegrass, black sagebrush, needleandthread

Hundraw: Indian ricegrass, Utah juniper, black sagebrush, needleandthread
 Okan: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat
 Inclusion 2: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 3: Indian ricegrass, Wyoming big sagebrush, spiny hopsage
 Inclusion 4: None

Ecological Site

Izar: 028BY011NV
 Hundraw: 028BY083NV
 Okan: 028BY010NV
 Inclusion 1: 028BY045NV
 Inclusion 2: 028BY011NV
 Inclusion 3: 028BY052NV
 Inclusion 4: None

260--Dewar-Chiara-Hunnton association

Composition

Major Components

Dewar gravelly silt loam, 2 to 8 percent slopes--40 percent
 Chiara silt loam, 2 to 8 percent slopes--30 percent
 Hunnton silt loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Durixerollic Haplargids, fine, montmorillonitic, mesic gravelly loam, 2 to 8 percent slopes--5 percent
 Inclusion 2: Enko sandy loam, 2 to 4 percent slopes--5 percent
 Inclusion 3: Pharo gravelly silt loam, 4 to 15 percent slopes--3 percent
 Inclusion 4: Durixerollic Camborthids, loamy-skeletal, mixed, mesic gravelly loam, 15 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Dewar--Landform: Fan remnants; geomorphic position: summit
 Chiara--Landform: Fan remnants; geomorphic position: summit
 Hunnton--Landform: Fan remnants; geomorphic position: summit
 Inclusion 1--Landform: Fan remnants
 Inclusion 2--Landform: Inset fans

Inclusion 3--Landform: Fan remnants; geomorphic position: summit; position on slope: upper
 Inclusion 4--Landform: Fan remnants; geomorphic position: backslope

Major Component Description

Dewar Series

Elevation: 5,800 to 6,600 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 25 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Chiara Series

Elevation: 5,800 to 6,600 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Hunnton Series

Elevation: 5,800 to 6,600 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Dewar: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Chiara: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Hunnton: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Inclusion 1: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Inclusion 2: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Inclusion 3: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Inclusion 4: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Ecological Site

Dewar: 025XY019NV
 Chiara: 025XY019NV
 Hunnton: 025XY019NV
 Inclusion 1: 025XY019NV
 Inclusion 2: 025XY019NV
 Inclusion 3: 028BY006NV
 Inclusion 4: 025XY019NV

270--Chiara-Kelk association***Composition*****Major Components**

Chiara silt loam, 2 to 4 percent slopes--50 percent
 Kelk silt loam, 2 to 8 percent slopes--20 percent
 Kelk silt loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Xeric Torriorthents gravelly sandy loam, 8 to 30 percent slopes--10 percent
 Inclusion 2: Xerollic Camborthids, sandy-skeletal, mixed, mesic very gravelly sandy loam, 4 to 15 percent slopes--3 percent
 Inclusion 3: Dacker silt loam, 2 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Chiara--Landform: Fan remnants
 Kelk--Landform: Inset fans
 Kelk--Landform: Inset fans
 Inclusion 1--Landform: Pediments; geomorphic position: backslope
 Inclusion 2--Landform: Fan remnants; geomorphic position: backslope
 Inclusion 3--Landform: Fan remnants

Major Component Description**Chiara Series**

Elevation: 5,700 to 5,800 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Kelk Series

Elevation: 5,700 to 5,800 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 5 percent gravel

Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Kelk Series

Elevation: 5,700 to 5,800 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Chiara: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Kelk: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Kelk: Basin big sagebrush, basin wildrye, black greasewood
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, black sagebrush
 Inclusion 2: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Inclusion 3: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Ecological Site

Chiara: 025XY019NV
 Kelk: 025XY019NV
 Kelk: 024XY006NV
 Inclusion 1: 025XY025NV
 Inclusion 2: 025XY019NV
 Inclusion 3: 025XY019NV

273--Chiara-Dewar-Enko association***Composition*****Major Components**

Chiara silt loam, 2 to 4 percent slopes--40 percent
 Dewar gravelly silt loam, 2 to 4 percent slopes--35 percent
 Enko fine sandy loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Dacker silt loam, 2 to 8 percent slopes--6 percent
 Inclusion 2: Peeko gravelly silt loam, 2 to 4 percent slopes--3 percent

Inclusion 3: Xerollic Camborthids, coarse-silty, mixed, mesic gravelly silt loam, 2 to 4 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Chiara--Landform: Fan remnants
 Dewar--Landform: Fan remnants
 Enko--Landform: Inset fans
 Inclusion 1--Landform: Fan remnants
 Inclusion 2--Landform: Fan remnants
 Inclusion 3--Landform: Inset fans

Major Component Description

Chiara Series

Elevation: 5,700 to 6,200 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dewar Series

Elevation: 5,700 to 6,200 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 25 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Enko Series

Elevation: 5,700 to 6,200 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Chiara: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Dewar: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Enko: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Inclusion 1: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Inclusion 2: Indian ricegrass, Thurber needlegrass, black sagebrush

Inclusion 3: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Ecological Site

Chiara: 025XY019NV
 Dewar: 025XY019NV
 Enko: 025XY019NV
 Inclusion 1: 025XY019NV
 Inclusion 2: 024XY030NV
 Inclusion 3: 025XY019NV

276--Chiara-Peeko-Urmafot association

Composition

Major Components

Chiara silt loam, 2 to 4 percent slopes--40 percent
 Peeko gravelly loam, 2 to 4 percent slopes--30 percent
 Urmafot gravelly loam, 4 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Durixerollic Camborthids, loamy-skeletal, mixed, mesic gravelly loam, 2 to 8 percent slopes--10 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Chiara--Landform: Fan remnants; geomorphic position: summit
 Peeko--Landform: Fan remnants; geomorphic position: summit
 Urmafot--Landform: Fan remnants; position on slope: upper
 Inclusion 1--Landform: Inset fans

Major Component Description

Chiara Series

Elevation: 5,700 to 6,500 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Peeko Series

Elevation: 5,700 to 6,500 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Urmafot Series

Elevation: 5,700 to 6,500 feet
 Precipitation: About 12 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Chiara: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Peeko: Indian ricegrass, Thurber needlegrass, black sagebrush
 Urmafot: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread

Ecological Site

Chiara: 025XY019NV
 Peeko: 024XY030NV
 Urmafot: 028BY006NV
 Inclusion 1: 028BY010NV

279--Chiara-Parisa-Enko association***Composition*****Major Components**

Chiara silt loam, 2 to 8 percent slopes--40 percent
 Parisa gravelly loam, 2 to 8 percent slopes--30 percent
 Enko loam, 2 to 4 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Aridic Durixerolls, loamy-skeletal, mixed, mesic gravelly loam, 4 to 15 percent slopes--5 percent
 Inclusion 2: Hunnion loam, 2 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts

Chiara--Landform: Fan remnants

Parisa--Landform: Fan remnants

Enko--Landform: Inset fans

Inclusion 1--Landform: Fan remnants; position on slope: upper

Inclusion 2--Landform: Fan remnants

Major Component Description**Chiara Series**

Elevation: 5,600 to 7,000 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Parisa Series

Elevation: 5,600 to 7,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 65 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Enko Series

Elevation: 5,600 to 7,000 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Chiara: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Parisa: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Enko: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 1: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread

Ecological Site

Chiara: 028BY010NV

Parisa: 028BY010NV
 Enko: 028BY010NV
 Inclusion 1: 028BY007NV
 Inclusion 2: 028BY010NV

280--Oupico-Enko association

Composition

Major Components

Oupico loam, 2 to 4 percent slopes--65 percent
 Enko loam, 2 to 8 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Chiara silt loam, 0 to 2 percent slopes--5 percent
 Inclusion 2: Durixerollic Camborthids, loamy-skeletal, mixed, mesic gravelly loam, 8 to 15 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Oupico--Landform: Fan remnants
 Enko--Landform: Inset fans
 Inclusion 1--Landform: Fan remnants
 Inclusion 2--Landform: Fan remnants; geomorphic position: backslope

Major Component Description

Oupico Series

Elevation: 5,600 to 6,200 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Enko Series

Elevation: 5,600 to 6,200 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 25 percent gravel
 Surface layer texture: Loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Oupico: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Enko: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Inclusion 1: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Inclusion 2: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Ecological Site

Oupico: 025XY019NV
 Enko: 025XY019NV
 Inclusion 1: 025XY019NV
 Inclusion 2: 025XY019NV

282--Shabliss-Pyrat-Okan association

Composition

Major Components

Shabliss gravelly fine sandy loam, 2 to 8 percent slopes--40 percent
 Pyrat gravelly sandy loam, 2 to 8 percent slopes--25 percent
 Okan sandy loam, 2 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Palisor very gravelly sandy loam, 2 to 8 percent slopes--6 percent
 Inclusion 2: Xerollic Camborthids, coarse-loamy, mixed, mesic silt loam, 0 to 4 percent slopes--5 percent
 Inclusion 3: Xerollic Durorthids, loamy, mixed, mesic, shallow very gravelly loam, 4 to 15 percent slopes--3 percent
 Inclusion 4: Tulasie silty clay loam, 0 to 4 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Shabliss--Landform: Fan remnants; geomorphic position: summit
 Pyrat--Landform: Inset fans
 Okan--Landform: Inset fans
 Inclusion 1--Landform: Fan remnants
 Inclusion 2--Landform: Inset fans
 Inclusion 3--Landform: Fan remnants; geomorphic position: backslope
 Inclusion 4--Landform: Inset fans

Major Component Description

Shabliss Series

Elevation: 5,600 to 6,400 feet
 Precipitation: About 8 inches

Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Pyrat Series

Elevation: 5,600 to 6,400 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Okan Series

Elevation: 5,600 to 6,400 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Shabliss: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Pyrat: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Okan: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 3: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 4: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat

Ecological Site

Shabliss: 028BY010NV
 Pyrat: 028BY010NV
 Okan: 028BY010NV

Inclusion 1: 028BY011NV
 Inclusion 2: 028BY010NV
 Inclusion 3: 028BY080NV
 Inclusion 4: 028BY045NV

310--Sonoma-Devilsgait association

Composition

Major Components

Sonoma silty clay loam, 0 to 2 percent slopes--40 percent
 Devilsgait silt loam, 0 to 2 percent slopes--30 percent
 Sonoma silt loam, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Sonoma silt loam, 0 to 2 percent slopes--5 percent
 Inclusion 2: Devilsgait silty clay, 0 to 2 percent slopes--4 percent
 Inclusion 3: Cumulic Endoaquolls, fine-silty, mixed, frigid silt loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
 Sonoma--Landform: Flood plains
 Devilsgait--Landform: Flood plains
 Sonoma--Landform: Flood plains
 Inclusion 1--Landform: Alluvial flats
 Inclusion 2--Landform: Flood plains
 Inclusion 3--Landform: Flood plains

Major Component Description

Sonoma Series

Elevation: 5,600 to 5,700 feet
 Precipitation: About 8 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay loam
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Devilsgait Series

Elevation: 5,600 to 5,700 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Very poorly drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Sonoma Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 8 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Poorly drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Sonoma: Alkali cordgrass, alkali muhly, alkali sacaton

Devilsgait: Basin big sagebrush, basin wildrye, creeping wildrye, willow

Sonoma: Basin big sagebrush, basin wildrye, black greasewood

Inclusion 1: Alkali sacaton, basin wildrye, black greasewood, inland saltgrass

Inclusion 2: Basin big sagebrush, basin wildrye, creeping wildrye, willow

Inclusion 3: Tufted hairgrass

Ecological Site

Sonoma: 024XY009NV

Devilsgait: 025XY001NV

Sonoma: 024XY006NV

Inclusion 1: 024XY007NV

Inclusion 2: 025XY001NV

Inclusion 3: 025XY005NV

311--Sonoma-Kelk association***Composition*****Major Components**

Sonoma silt loam, 0 to 2 percent slopes--55 percent

Kelk silt loam, 0 to 2 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Wendane silt loam, 0 to 2 percent slopes--8 percent

Inclusion 2: Devilsgait silt loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins

Sonoma--Landform: Flood plains

Kelk--Landform: Fan skirts

Inclusion 1--Landform: Alluvial flats

Inclusion 2--Landform: Flood plains

Major Component Description**Sonoma Series**

Elevation: 5,500 to 6,000 feet

Precipitation: About 8 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Poorly drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Kelk Series

Elevation: 5,500 to 6,000 feet

Precipitation: About 9 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 5 percent gravel

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Sonoma: Basin big sagebrush, basin wildrye

Kelk: Basin big sagebrush, basin wildrye, black greasewood

Inclusion 1: Alkali sacaton, basin wildrye, black greasewood, inland saltgrass

Inclusion 2: Basin big sagebrush, basin wildrye

Ecological Site

Sonoma: 025XY003NV

Kelk: 024XY006NV

Inclusion 1: 024XY007NV

Inclusion 2: 025XY003NV

330--Kzin-Holborn association***Composition*****Major Components**

Kzin very gravelly loam, 8 to 30 percent slopes--35 percent

Holborn gravelly loam, 4 to 15 percent slopes--30 percent

Kzin very gravelly loam, 30 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Urmafot gravelly silt loam, 4 to 15 percent slopes--5 percent

Inclusion 2: Cumulic Endoaquolls, fine-loamy, mixed (calcareous), frigid silt loam, 2 to 8 percent slopes--4 percent

Inclusion 3: Xerollic Haplargids, loamy-skeletal, mixed, mesic, shallow gravelly loam, 30 to 50 percent slopes--3 percent

Inclusion 4: Aridic Argixerolls, fine, montmorillonitic, mesic very gravelly loam, 8 to 30 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts

Kzin--Landform: Pediments; geomorphic position: backslope

Holborn--Landform: Pediments; geomorphic position: summit

Kzin--Landform: Pediments; geomorphic position: backslope

Inclusion 1--Landform: Fan remnants

Inclusion 2--Landform: Drainageways

Inclusion 3--Landform: Pediments; geomorphic position: backslope

Inclusion 4--Landform: Pediments; geomorphic position: backslope; shape of slope: concave

Major Component Description

Kzin Series

Elevation: 5,300 to 6,800 feet

Precipitation: About 11 inches

Air temperature: About 47 degrees

Frost-free season: About 100 days

Surface rock fragments: 80 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum derived from sedimentary rocks

Holborn Series

Elevation: 5,300 to 6,800 feet

Precipitation: About 11 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 25 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Kzin Series

Elevation: 5,300 to 6,800 feet

Precipitation: About 11 inches

Air temperature: About 47 degrees

Frost-free season: About 100 days

Surface rock fragments: 80 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum derived from sedimentary rocks

Dominant Present Vegetation

Kzin: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Holborn: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Kzin: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Inclusion 1: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Inclusion 2: Basin big sagebrush, basin wildrye, rubber rabbitbrush

Inclusion 3: Thurber needlegrass, black sagebrush, bluebunch wheatgrass

Inclusion 4: Thurber needlegrass, big sagebrush, bluebunch wheatgrass

Ecological Site

Kzin: 028BY060NV

Holborn: 028BY006NV

Kzin: 028BY060NV

Inclusion 1: 028BY006NV

Inclusion 2: 028BY003NV

Inclusion 3: 024XY031NV

Inclusion 4: 028BY007NV

331--Kzin-Cobre-Jackpot association

Composition

Major Components

Kzin very gravelly loam, 15 to 50 percent slopes--45 percent

Cobre silt loam, 4 to 15 percent slopes--25 percent

Jackpot sandy loam, 4 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Typic Torriorthents, coarse-loamy, mixed, nonacid, mesic sandy loam, 2 to 8 percent slopes--5 percent

Inclusion 2: Hundraw gravelly fine sandy loam, 8 to 30 percent slopes--5 percent

Inclusion 3: Izar very gravelly loam, 8 to 30 percent slopes--4 percent

Inclusion 4: Rock outcrop--1 percent

Map Unit Setting

Landscape position: Fan piedmonts

Kzin--Landform: Pediments; geomorphic position: backslope

Cobre--Landform: Pediments; geomorphic position: backslope; position on slope: lower

Jackpot--Landform: Pediments; geomorphic position: backslope; position on slope: upper

Inclusion 1--Landform: Drainageways

Inclusion 2--Landform: Pediments; geomorphic

position: backslope
 Inclusion 3--Landform: Pediments; geomorphic
 position: backslope
 Inclusion 4--Landform: Pediments; geomorphic
 position: summit

Major Component Description

Kzin Series

Elevation: 5,900 to 6,400 feet
 Precipitation: About 11 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 80 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum derived from
 sedimentary rocks

Cobre Series

Elevation: 5,900 to 6,400 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from tuffaceous rocks

Jackpot Series

Elevation: 5,900 to 6,400 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Residuum derived from
 tuffaceous rocks

Dominant Present Vegetation

Kzin: Utah juniper, black sagebrush, bluebunch
 wheatgrass, singleleaf pinyon
 Cobre: Indian ricegrass, Wyoming big sagebrush,
 needleandthread
 Jackpot: Indian ricegrass, big sagebrush,
 needleandthread
 Inclusion 1: Indian ricegrass, fourwing saltbush, spiny
 hopsage
 Inclusion 2: Thurber needlegrass, Utah juniper, black
 sagebrush, bluebunch wheatgrass
 Inclusion 3: Indian ricegrass, black sagebrush,
 needleandthread
 Inclusion 4: None

Ecological Site

Kzin: 028BY060NV
 Cobre: 028BY010NV
 Jackpot: 024XY017NV
 Inclusion 1: 028BY078NV
 Inclusion 2: 025XY060NV
 Inclusion 3: 028BY011NV
 Inclusion 4: None

333--Kzin-Holborn-Onkeyo association

Composition

Major Components

Kzin very gravelly loam, 8 to 30 percent slopes--40
 percent
 Holborn gravelly loam, 4 to 15 percent slopes--30
 percent
 Onkeyo very gravelly silt loam, 15 to 50 percent slopes--
 15 percent

Contrasting Inclusions

Inclusion 1: Urmafot gravelly silt loam, 4 to 15 percent
 slopes--5 percent
 Inclusion 2: Xerollic Haplargids, loamy-skeletal, mixed,
 mesic, shallow gravelly loam, 30 to 50 percent slopes--
 5 percent
 Inclusion 3: Aridic Argixerolls, fine, montmorillonitic,
 mesic very gravelly loam, 8 to 30 percent slopes--5
 percent

Map Unit Setting

Landscape position: Mountains and foothills
 Kzin--Landform: Hills; geomorphic position: backslope
 Holborn--Landform: Hills; geomorphic position:
 backslope
 Onkeyo--Landform: Mountains; geomorphic position:
 backslope
 Inclusion 1--Landform: Fan remnants
 Inclusion 2--Landform: Hills; geomorphic position:
 backslope
 Inclusion 3--Landform: Fan remnants; geomorphic
 position: summit

Major Component Description

Kzin Series

Elevation: 5,600 to 6,500 feet
 Precipitation: About 11 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 80 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum derived from
 sedimentary rocks

Holborn Series

Elevation: 5,700 to 6,500 feet
 Precipitation: About 11 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 25 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from tuffaceous rocks

Onkeyo Series

Elevation: 6,000 to 8,200 feet
 Precipitation: About 14 inches
 Air temperature: About 44 degrees
 Frost-free season: About 90 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from limestone and dolomite

Dominant Present Vegetation

Kzin: Utah juniper, black sagebrush, bluebunch
 wheatgrass, singleleaf pinyon
 Holborn: Indian ricegrass, black sagebrush, bluebunch
 wheatgrass
 Onkeyo: Indian ricegrass, bluebunch wheatgrass,
 mountain big sagebrush
 Inclusion 1: Indian ricegrass, black sagebrush,
 bluebunch wheatgrass
 Inclusion 2: Thurber needlegrass, black sagebrush,
 bluebunch wheatgrass
 Inclusion 3: Thurber needlegrass, big sagebrush

Ecological Site

Kzin: 028BY060NV
 Holborn: 028BY006NV
 Onkeyo: 028BY079NV
 Inclusion 1: 028BY006NV
 Inclusion 2: 024XY031NV
 Inclusion 3: 028BY007NV

340--Shuttle-Hardhat association

Composition

Major Components

Shuttle silt loam, 2 to 8 percent slopes--40 percent
 Hardhat silt loam, 2 to 8 percent slopes--30 percent
 Shuttle silt loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Toano silt loam, 2 to 8 percent slopes--10
 percent

Inclusion 2: Loray very gravelly sandy loam, 2 to 8
 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Shuttle--Landform: Fan skirts; position on slope: upper
 Hardhat--Landform: Fan skirts; position on slope: lower
 Shuttle--Landform: Fan skirts; position on slope: lower
 Inclusion 1--Landform: Drainageways
 Inclusion 2--Landform: Fan skirts

Major Component Description

Shuttle Series

Elevation: 4,900 to 5,300 feet
 Precipitation: About 6 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed
 rocks

Hardhat Series

Elevation: 4,900 to 5,300 feet
 Precipitation: About 6 inches
 Air temperature: About 49 degrees
 Frost-free season: About 115 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed
 rocks over lacustrine sediments

Shuttle Series

Elevation: 4,900 to 5,300 feet
 Precipitation: About 6 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed
 rocks

Dominant Present Vegetation

Shuttle: Indian ricegrass, winterfat
 Hardhat: Bottlebrush squirreltail, shadscale
 Shuttle: Indian ricegrass, winterfat
 Inclusion 1: Indian ricegrass, winterfat

Inclusion 2: Indian ricegrass, bud sagebrush, shadscale

Ecological Site

Shuttle: 028BY084NV

Hardhat: 028BY073NV

Shuttle: 028BY084NV

Inclusion 1: 028BY013NV

Inclusion 2: 028BY017NV

350--Jericho-Jericho, silt loam association

Composition

Major Components

Jericho gravelly sandy loam, 2 to 8 percent slopes--50 percent

Jericho silt loam, 2 to 4 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Jericho very cobbly loam, 8 to 30 percent slopes--5 percent

Inclusion 2: Typic Paleorthids, loamy, mixed, mesic, shallow gravelly loam, 2 to 8 percent slopes--5 percent

Inclusion 3: Xeric Torriorthents very gravelly loam, 2 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts

Jericho--Landform: Fan remnants

Jericho--Landform: Fan remnants

Inclusion 1--Landform: Fan remnants; geomorphic position: backslope

Inclusion 2--Landform: Fan remnants

Inclusion 3--Landform: Inset fans

Major Component Description

Jericho Series

Elevation: 5,100 to 6,000 feet

Precipitation: About 8 inches

Air temperature: About 49 degrees

Frost-free season: About 120 days

Surface rock fragments: 35 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Jericho Series

Elevation: 5,100 to 6,000 feet

Precipitation: About 8 inches

Air temperature: About 49 degrees

Frost-free season: About 120 days

Surface rock fragments: 45 percent gravel

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Jericho: Indian ricegrass, Wyoming big sagebrush, needleandthread

Jericho: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 2: Indian ricegrass, galleta, winterfat

Inclusion 3: Indian ricegrass, Wyoming big sagebrush, needleandthread

Ecological Site

Jericho: 028BY010NV

Jericho: 028BY052NV

Inclusion 1: 028BY010NV

Inclusion 2: 028AY002NV

Inclusion 3: 028BY010NV

351--Shabliss-Okan-Eastwell association

Composition

Major Components

Shabliss gravelly fine sandy loam, 2 to 8 percent slopes--40 percent

Okan sandy loam, 2 to 8 percent slopes--35 percent

Eastwell gravelly sandy loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Idway sandy loam, 2 to 4 percent slopes--4 percent

Inclusion 2: Loray very gravelly sandy loam, 0 to 4 percent slopes--3 percent

Inclusion 3: Wintermute gravelly sandy loam, 2 to 4 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts

Shabliss--Landform: Fan remnants

Okan--Landform: Inset fans

Eastwell--Landform: Fan remnants

Inclusion 1--Landform: Fan skirts

Inclusion 2--Landform: Fan skirts

Inclusion 3--Landform: Fan remnants; position on slope: lower

Major Component Description

Shabliss Series

Elevation: 5,700 to 6,400 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Okan Series

Elevation: 5,700 to 6,400 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Eastwell Series

Elevation: 5,700 to 6,400 feet
 Precipitation: About 8 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 65 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Shabliss: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Okan: Indian ricegrass, Wyoming big sagebrush, spiny hopsage
 Eastwell: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 1: Basin wildrye, big sagebrush, black greasewood
 Inclusion 2: Indian ricegrass, bud sagebrush, shadscale
 Inclusion 3: Indian ricegrass, bud sagebrush, shadscale, winterfat

Ecological Site

Shabliss: 028BY010NV
 Okan: 028BY052NV
 Eastwell: 028BY011NV
 Inclusion 1: 028BY028NV
 Inclusion 2: 028BY017NV
 Inclusion 3: 028BY075NV

355--Shabliss-Okan association

Composition

Major Components

Shabliss gravelly fine sandy loam, 2 to 8 percent slopes--50 percent
 Okan sandy loam, 2 to 4 percent slopes--20 percent
 Okan sandy loam, moist, 2 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Linoyer silt loam, 2 to 8 percent slopes--8 percent
 Inclusion 2: Palinor very gravelly sandy loam, 2 to 8 percent slopes--6 percent
 Inclusion 3: Loray very gravelly sandy loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Shabliss--Landform: Fan remnants
 Okan--Landform: Inset fans
 Okan--Landform: Inset fans
 Inclusion 1--Landform: Inset fans
 Inclusion 2--Landform: Fan remnants
 Inclusion 3--Landform: Inset fans

Major Component Description

Shabliss Series

Elevation: 5,700 to 6,700 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Okan Series

Elevation: 5,700 to 6,700 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Okan Series

Elevation: 5,700 to 6,700 feet

Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Shabliss: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Okan: Indian ricegrass, Wyoming big sagebrush, spiny hopsage
 Okan: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, winterfat
 Inclusion 2: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 3: Indian ricegrass, bud sagebrush, shadscale

Ecological Site

Shabliss: 028BY010NV
 Okan: 028BY052NV
 Okan: 028BY010NV
 Inclusion 1: 028BY013NV
 Inclusion 2: 028BY011NV
 Inclusion 3: 028BY017NV

Major Component Description

Toano Series

Elevation: 5,600 to 5,900 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 115 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Tulase Series

Elevation: 5,600 to 5,900 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Very fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Toano: Indian ricegrass, sickle saltbush, western wheatgrass
 Tulase: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Inclusion 1: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Inclusion 2: Indian ricegrass, winterfat
 Inclusion 3: Bottlebrush squirreltail, shadscale

370--Toano-Tulase association

Composition

Major Components

Toano silt loam, 0 to 2 percent slopes--55 percent
 Tulase very fine sandy loam, 0 to 2 percent slopes--30 percent

Contrasting Inclusions

Inclusion 1: Xeric Torriorthents very gravelly loam, 2 to 4 percent slopes--5 percent
 Inclusion 2: Linoyer very fine sandy loam, 2 to 4 percent slopes--5 percent
 Inclusion 3: Typic Torriorthents, coarse-loamy, mixed (calcareous), mesic silt loam, 2 to 4 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Toano--Landform: Inset fans
 Tulase--Landform: Inset fans
 Inclusion 1--Landform: Inset fans
 Inclusion 2--Landform: Inset fans
 Inclusion 3--Landform: Inset fans

Ecological Site

Toano: 028BY047NV
 Tulase: 025XY019NV
 Inclusion 1: 025XY019NV
 Inclusion 2: 028BY013NV
 Inclusion 3: 028BY073NV

371--Linoyer-Okan association

Composition

Major Components

Linoyer silt loam, 2 to 4 percent slopes--50 percent
 Okan sandy loam, 2 to 4 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic gravelly fine sandy loam, 2 to 4 percent slopes--7 percent
 Inclusion 2: Shabliss gravelly fine sandy loam, 2 to 45 percent slopes--6 percent
 Inclusion 3: Automal gravelly fine sandy loam, 2 to

8 percent slopes--1 percent
Inclusion 4: Okan gravelly sandy loam, 2 to 4 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
Linoyer--Landform: Fan skirts
Okan--Landform: Fan skirts
Inclusion 1--Landform: Fan skirts
Inclusion 2--Landform: Fan remnants
Inclusion 3--Landform: Fan remnants
Inclusion 4--Landform: Inset fans

Major Component Description

Linoyer Series

Elevation: 5,700 to 6,500 feet
Precipitation: About 8 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Okan Series

Elevation: 5,700 to 6,500 feet
Precipitation: About 8 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface rock fragments: 15 percent gravel
Surface layer texture: Sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Linoyer: Indian ricegrass, winterfat
Okan: Indian ricegrass, Wyoming big sagebrush, needleandthread
Inclusion 1: Indian ricegrass, winterfat
Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread
Inclusion 3: Indian ricegrass, black sagebrush, needleandthread
Inclusion 4: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Ecological Site

Linoyer: 028BY013NV
Okan: 028BY010NV
Inclusion 1: 028BY084NV
Inclusion 2: 028BY010NV
Inclusion 3: 028BY011NV
Inclusion 4: 028BY052NV

373--Timpie-Piltdown-Linoyer association

Composition

Major Components

Timpie silt loam, 0 to 2 percent slopes--35 percent
Piltdown fine sandy loam, 2 to 8 percent slopes--30 percent
Linoyer silt loam, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Typic Torripsamments, mixed, mesic fine sand, 8 to 15 percent slopes--8 percent
Inclusion 2: Xeric Torriorthents fine sandy loam, 2 to 4 percent slopes--4 percent
Inclusion 3: Katelana silt loam, 0 to 2 percent slopes--2 percent
Inclusion 4: Typic Torriorthents, fine-silty, mixed (calcareous), mesic silt loam, 0 to 4 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
Timpie--Landform: Alluvial flats
Piltdown--Landform: Sand sheets
Linoyer--Landform: Alluvial flats
Inclusion 1--Landform: Dunes
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Lake plains
Inclusion 4--Landform: Lake plains

Major Component Description

Timpie Series

Elevation: 5,800 to 6,200 feet
Precipitation: About 7 inches
Air temperature: About 49 degrees
Frost-free season: About 130 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Piltdown Series

Elevation: 5,800 to 6,200 feet
Precipitation: About 7 inches
Air temperature: About 48 degrees
Frost-free season: About 110 days
Surface layer texture: Fine sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks

Linoyer Series

Elevation: 5,800 to 6,200 feet
Precipitation: About 8 inches
Air temperature: About 47 degrees

Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Timpie: Indian ricegrass, bud sagebrush, shadscale, winterfat
 Piltdown: Indian ricegrass, fourwing saltbush, winterfat
 Linoyer: Indian ricegrass, winterfat
 Inclusion 1: Black greasewood, bottlebrush squirreltail, sickle saltbush
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 3: Bottlebrush squirreltail, shadscale
 Inclusion 4: Indian ricegrass, needleandthread, pigmy sagebrush

Ecological Site

Timpie: 028BY075NV
 Piltdown: 029XY012NV
 Linoyer: 028BY013NV
 Inclusion 1: 028BY097NV
 Inclusion 2: 028BY010NV
 Inclusion 3: 028BY073NV
 Inclusion 4: 028BY040NV

374--Heist-Okan-Zerk association

Composition

Major Components

Heist fine sandy loam, 2 to 4 percent slopes--55 percent
 Okan sandy loam, 2 to 4 percent slopes--15 percent
 Zerk gravelly sandy loam, 2 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Wintermute gravelly silt loam, 2 to 4 percent slopes--5 percent
 Inclusion 2: Xerollic Calciorthids, sandy-skeletal, mixed, mesic very gravelly sandy loam, 2 to 4 percent slopes--5 percent
 Inclusion 3: Katelana silt loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Heist--Landform: Fan remnants
 Okan--Landform: Inset fans
 Zerk--Landform: Inset fans
 Inclusion 1--Landform: Fan remnants
 Inclusion 2--Landform: Inset fans

Inclusion 3--Landform: Lagoons; position on slope: lower

Major Component Description

Heist Series

Elevation: 6,100 to 6,300 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 35 percent gravel
 Surface layer texture: Fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Okan Series

Elevation: 6,100 to 6,300 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Zerk Series

Elevation: 6,100 to 6,300 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Heist: Indian ricegrass, winterfat
 Okan: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Zerk: Indian ricegrass, bud sagebrush, shadscale, winterfat
 Inclusion 1: Indian ricegrass, bud sagebrush, shadscale, winterfat
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 3: Bottlebrush squirreltail, shadscale

Ecological Site

Heist: 028BY084NV
 Okan: 028BY010NV
 Zerk: 028BY075NV
 Inclusion 1: 028BY075NV

Inclusion 2: 028BY010NV
Inclusion 3: 028BY073NV

Dominant parent material: Alluvium derived from mixed rocks

375--Toano-Heist association

Composition

Major Components

Toano silt loam, 0 to 2 percent slopes--60 percent
Heist fine sandy loam, 0 to 2 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Linoyer silt loam, 0 to 4 percent slopes--9 percent
Inclusion 2: Katelana silt loam, 0 to 2 percent slopes--3 percent
Inclusion 3: Okan gravelly sandy loam, 2 to 4 percent slopes--2 percent
Inclusion 4: Sheffit silt loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts

Toano--Landform: Fan skirts
Heist--Landform: Fan skirts; position on slope: upper
Inclusion 1--Landform: Fan skirts
Inclusion 2--Landform: Lake plains
Inclusion 3--Landform: Drainageways
Inclusion 4--Landform: Lake plains

Major Component Description

Toano Series

Elevation: 5,600 to 6,500 feet
Precipitation: About 7 inches
Air temperature: About 47 degrees
Frost-free season: About 115 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Heist Series

Elevation: 5,600 to 6,500 feet
Precipitation: About 8 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface rock fragments: 35 percent gravel
Surface layer texture: Fine sandy loam
Drainage class: Well drained

Dominant Present Vegetation

Toano: Indian ricegrass, sickle saltbush, western wheatgrass
Heist: Indian ricegrass, winterfat
Inclusion 1: Indian ricegrass, winterfat
Inclusion 2: Bottlebrush squirreltail, shadscale
Inclusion 3: Indian ricegrass, Wyoming big sagebrush, needleandthread
Inclusion 4: Basin wildrye, big sagebrush, black greasewood

Ecological Site

Toano: 028BY047NV
Heist: 028BY084NV
Inclusion 1: 028BY013NV
Inclusion 2: 028BY073NV
Inclusion 3: 028BY010NV
Inclusion 4: 028BY028NV

380--Cobre-Izar-Jackpot association

Composition

Major Components

Cobre silt loam, 4 to 15 percent slopes--40 percent
Izar very gravelly loam, 4 to 15 percent slopes--30 percent
Jackpot sandy loam, 4 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Tulase very fine sandy loam, 0 to 2 percent slopes--10 percent
Inclusion 2: Hundraw gravelly fine sandy loam, 8 to 30 percent slopes--3 percent
Inclusion 3: Xeric Torriorthents gravelly sandy loam, 8 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills

Cobre--Landform: Hills; geomorphic position: backslope; shape of slope: concave
Izar--Landform: Hills; geomorphic position: backslope; shape of slope: convex
Jackpot--Landform: Hills; geomorphic position: backslope; shape of slope: convex
Inclusion 1--Landform: Drainageways
Inclusion 2--Landform: Pediments; geomorphic position: backslope

Inclusion 3--Landform: Hills; geomorphic position: backslope; shape of slope: convex

Major Component Description

Cobre Series

Elevation: 5,800 to 6,000 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Izar Series

Elevation: 5,800 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Very gravelly loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Jackpot Series

Elevation: 5,800 to 6,000 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Cobre: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Izar: Indian ricegrass, Thurber needlegrass, black sagebrush
 Jackpot: Indian ricegrass, big sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 2: Thurber needlegrass, Utah juniper, black sagebrush, bluebunch wheatgrass
 Inclusion 3: Indian ricegrass, Wyoming big sagebrush, black sagebrush

Ecological Site

Cobre: 028BY010NV
 Izar: 024XY030NV

Jackpot: 024XY017NV
 Inclusion 1: 028BY010NV
 Inclusion 2: 025XY060NV
 Inclusion 3: 025XY025NV

381--Cobre-Hundraw-Jackpot association

Composition

Major Components

Cobre silt loam, 4 to 15 percent slopes--50 percent
 Hundraw gravelly fine sandy loam, 8 to 30 percent slopes--20 percent
 Jackpot sandy loam, 2 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Izar very gravelly loam, 8 to 30 percent slopes--5 percent
 Inclusion 2: Xeric Torriorthents gravelly sandy loam, 30 to 50 percent slopes--5 percent
 Inclusion 3: Xerollic Haplargids, loamy, mixed, mesic, shallow gravelly loam, 4 to 15 percent slopes--5 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
 Cobre--Landform: Hills; geomorphic position: backslope; position on slope: lower
 Hundraw--Landform: Pediments; geomorphic position: backslope
 Jackpot--Landform: Pediments; geomorphic position: backslope; position on slope: upper
 Inclusion 1--Landform: Pediments; geomorphic position: backslope
 Inclusion 2--Landform: Hills; geomorphic position: backslope
 Inclusion 3--Landform: Hills; geomorphic position: backslope

Major Component Description

Cobre Series

Elevation: 5,700 to 6,400 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Hundraw Series

Elevation: 5,700 to 6,400 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees

Frost-free season: About 110 days
 Surface rock fragments: 25 percent cobbles; 30 percent gravel
 Surface layer texture: Gravelly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from volcanic rocks, loess and volcanic ash

Jackpot Series

Elevation: 5,700 to 6,400 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Residuum derived from tuffaceous rocks

Dominant Present Vegetation

Cobre: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Hundraw: Thurber needlegrass, Utah juniper, black sagebrush, bluebunch wheatgrass
 Jackpot: Indian ricegrass, big sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, black sagebrush
 Inclusion 3: Thurber needlegrass, black sagebrush, bluebunch wheatgrass

Ecological Site

Cobre: 028BY010NV
 Hundraw: 025XY060NV
 Jackpot: 024XY060NV
 Inclusion 1: 028BY011NV
 Inclusion 2: 025XY025NV
 Inclusion 3: 024XY031NV

382--Cobre-Enko association

Composition

Major Components

Cobre silt loam, 4 to 15 percent slopes--60 percent
 Enko fine sandy loam, 2 to 8 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Xerollic Camborthids, loamy-skeletal, mixed, mesic, shallow cobbly silt loam, 15 to 30 percent slopes--6 percent
 Inclusion 2: Hundraw very cobbly silt loam, 8 to 30 percent slopes--3 percent
 Inclusion 3: Palino very gravelly loam, 2 to 8 percent slopes--3 percent

Inclusion 4: Kzin very gravelly loam, 4 to 15 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Cobre--Landform: Pediments; geomorphic position: backslope
 Enko--Landform: Inset fans
 Inclusion 1--Landform: Pediments; geomorphic position: backslope
 Inclusion 2--Landform: Pediments; geomorphic position: backslope
 Inclusion 3--Landform: Fan remnants; geomorphic position: summit
 Inclusion 4--Landform: Pediments; geomorphic position: backslope; position on slope: upper

Major Component Description

Cobre Series

Elevation: 5,600 to 6,600 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Enko Series

Elevation: 5,600 to 6,600 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Cobre: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Enko: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Inclusion 1: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Inclusion 2: Thurber needlegrass, Utah juniper, black sagebrush, bluebunch wheatgrass
 Inclusion 3: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 4: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Ecological Site

Cobre: 025XY019NV
 Enko: 025XY019NV
 Inclusion 1: 025XY019NV
 Inclusion 2: 025XY060NV
 Inclusion 3: 028BY011NV
 Inclusion 4: 028BY060NV

Air temperature: About 38 degrees
 Frost-free season: About 50 days
 Surface rock fragments: 1 percent stones and boulders; 5 percent cobbles; 5 percent gravel
 Surface layer texture: Stony loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from sedimentary rocks

390--Hardol-Muiral-Rubble land association***Composition*****Major Components**

Hardol very gravelly silt loam, 30 to 75 percent slopes--40 percent
 Muiral stony loam, 50 to 75 percent slopes--25 percent
 Rubble land fragmental material, 50 to 75 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--8 percent
 Inclusion 2: Adobe extremely gravelly loam, 15 to 50 percent slopes--7 percent

Map Unit Setting

Landscape position: Mountains

Hardol--Landform: Mountains; geomorphic position: backslope; shape of slope: concave

Muiral--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north

Rubble land--Landform: Mountains

Inclusion 1--Landform: Mountains; geomorphic position: summit

Inclusion 2--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Major Component Description**Hardol Series**

Elevation: 7,000 to 10,700 feet
 Precipitation: About 20 inches
 Air temperature: About 40 degrees
 Frost-free season: About 60 days
 Surface rock fragments: 10 percent cobbles; 20 percent gravel
 Surface layer texture: Very gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Muiral Series

Elevation: 7,000 to 10,700 feet
 Precipitation: About 18 inches

Rubble land Miscellaneous Area

Elevation: 7,000 to 10,700 feet
 Surface layer texture: Fragmental material
 Drainage class: Excessively drained

Dominant Present Vegetation

Hardol: Bluebunch wheatgrass, curleaf mountainmahogany, mountain big sagebrush
 Muiral: Limber pine, mountain big sagebrush, white fir
 Rubble land: None
 Inclusion 1: None
 Inclusion 2: Black sagebrush, bluebunch wheatgrass

Ecological Site

Hardol: 028BY042NV
 Muiral: 028BY063NV
 Rubble land: None
 Inclusion 1: None
 Inclusion 2: 028BY027NV

392--Hardol-Muiral-Onkeyo association***Composition*****Major Components**

Hardol very gravelly silt loam, 30 to 75 percent slopes--40 percent
 Muiral stony loam, 50 to 75 percent slopes--25 percent
 Onkeyo very gravelly silt loam, 15 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--8 percent
 Inclusion 2: Adobe extremely gravelly loam, 15 to 50 percent slopes--7 percent

Map Unit Setting

Landscape position: Mountains

Hardol--Landform: Mountains; geomorphic position: backslope; shape of slope: concave

Muiral--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north

Onkeyo--Landform: Mountains; geomorphic position: backslope

Inclusion 1--Landform: Mountains; geomorphic position: summit

Inclusion 2--Landform: Mountains; geomorphic position:

summit; shape of slope: convex

Major Component Description

Hardol Series

Elevation: 7,000 to 9,500 feet
 Precipitation: About 20 inches
 Air temperature: About 40 degrees
 Frost-free season: About 60 days
 Surface rock fragments: 10 percent cobbles; 20 percent gravel
 Surface layer texture: Very gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Muiral Series

Elevation: 7,000 to 10,700 feet
 Precipitation: About 18 inches
 Air temperature: About 38 degrees
 Frost-free season: About 50 days
 Surface rock fragments: 1 percent stones and boulders; 5 percent cobbles; 5 percent gravel
 Surface layer texture: Stony loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Onkeyo Series

Elevation: 7,000 to 8,200 feet
 Precipitation: About 14 inches
 Air temperature: About 44 degrees
 Frost-free season: About 90 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Hardol: Bluebunch wheatgrass, mountain big sagebrush
 Muiral: Limber pine, mountain big sagebrush, white fir
 Onkeyo: Indian ricegrass, bluebunch wheatgrass, mountain big sagebrush
 Inclusion 1: None
 Inclusion 2: Black sagebrush, bluebunch wheatgrass

Ecological Site

Hardol: 028BY042NV
 Muiral: 028BY063NV
 Onkeyo: 028BY079NV
 Inclusion 1: None
 Inclusion 2: 028BY027NV

400--Cleavage-Sumine association

Composition

Major Components

Cleavage very gravelly loam, 15 to 30 percent slopes--35 percent
 Cleavage very gravelly loam, 15 to 50 percent slopes--30 percent
 Sumine very gravelly loam, 30 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Aridic Haploxerolls, loamy-skeletal, mixed, frigid gravelly loam, 15 to 50 percent slopes--6 percent
 Inclusion 2: Lithic Argixerolls, loamy-skeletal, mixed, frigid extremely gravelly silt loam, 4 to 15 percent slopes--4 percent
 Inclusion 3: Pachic Argixerolls, fine-loamy, mixed, mesic gravelly loam, 8 to 30 percent slopes--3 percent
 Inclusion 4: Pachic Cryoborolls, loamy-skeletal, mixed gravelly loam, 15 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains

Cleavage--Landform: Mountains; geomorphic position: backslope; shape of slope: plane

Cleavage--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Sumine--Landform: Mountains; geomorphic position: backslope; aspect: south

Inclusion 1--Landform: Mountains; geomorphic position: backslope; shape of slope: plane; aspect: north

Inclusion 2--Landform: Mountains; geomorphic position: summit

Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: lower; aspect: north

Inclusion 4--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north

Major Component Description

Cleavage Series

Elevation: 7,000 to 7,500 feet
 Precipitation: About 14 inches
 Air temperature: About 44 degrees
 Frost-free season: About 80 days
 Surface rock fragments: 5 percent cobbles; 70 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Cleavage Series

Elevation: 7,000 to 7,500 feet

Precipitation: About 14 inches
 Air temperature: About 44 degrees
 Frost-free season: About 80 days
 Surface rock fragments: 5 percent cobbles; 70 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Sumine Series

Elevation: 7,000 to 7,500 feet
 Precipitation: About 12 inches
 Air temperature: About 42 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 10 percent cobbles; 50 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Dominant Present Vegetation

Cleavage: Idaho fescue, bluebunch wheatgrass, low sagebrush
 Cleavage: Idaho fescue, black sagebrush, low sagebrush
 Sumine: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
 Inclusion 1: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
 Inclusion 2: Thurber needlegrass, black sagebrush, bluebunch wheatgrass
 Inclusion 3: Idaho fescue, Utah serviceberry, bluebunch wheatgrass
 Inclusion 4: Idaho fescue, mountain big sagebrush, mountain brome, snowberry

Ecological Site

Cleavage: 025XY017NV
 Cleavage: 025XY024NV
 Sumine: 025XY009NV
 Inclusion 1: 025XY012NV
 Inclusion 2: 025XY057NV
 Inclusion 3: 025XY046NV
 Inclusion 4: 025XY004NV

410--Jericho very gravelly loam, 2 to 8 percent slopes

Composition

Major Components

Jericho very gravelly loam, 2 to 8 percent slopes--85 percent

Contrasting Inclusions

Inclusion 1: Xerollic Durorthids, loamy-skeletal, mixed, mesic gravelly sandy loam, 4 to 15 percent slopes--6 percent

Inclusion 2: Durixerollic Calciorthids, coarse-loamy, mixed, mesic gravelly sandy loam, 2 to 8 percent slopes--5 percent

Inclusion 3: Typic Durorthids, loamy, mixed, mesic, shallow gravelly clay loam, 4 to 15 percent slopes--2 percent

Inclusion 4: Heist fine sandy loam, 2 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Jericho--Landform: Fan remnants; geomorphic position: summit

Inclusion 1--Landform: Fan remnants; geomorphic position: backslope

Inclusion 2--Landform: Inset fans

Inclusion 3--Landform: Fan remnants; geomorphic position: backslope

Inclusion 4--Landform: Inset fans

Major Component Description

Jericho Series

Elevation: 5,000 to 6,400 feet
 Precipitation: About 8 inches
 Air temperature: About 49 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 45 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Jericho: Indian ricegrass, black sagebrush, galleta, needleandthread

Inclusion 1: Indian ricegrass, Utah juniper, black sagebrush, galleta

Inclusion 2: Indian ricegrass, Wyoming big sagebrush, galleta, spiny hopsage

Inclusion 3: Indian ricegrass, Utah juniper, pigmy sagebrush

Inclusion 4: Indian ricegrass, galleta, winterfat

Ecological Site

Jericho: 028AY013NV

Inclusion 1: 028AY027NV

Inclusion 2: 028AY028NV

Inclusion 3: 028AY021NV

Inclusion 4: 028AY002NV

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Armespan Series

Elevation: 5,200 to 6,300 feet

Precipitation: About 8 inches

Air temperature: About 52 degrees

Frost-free season: About 130 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

411--Jericho-Armespan association

Composition

Major Components

Jericho very gravelly loam, 8 to 30 percent slopes--60 percent

Armespan very gravelly sandy loam, 4 to 15 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Typic Calciorthids, loamy-skeletal, mixed, mesic very gravelly loam, 2 to 8 percent slopes--7 percent

Inclusion 2: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow gravelly sandy loam, 8 to 30 percent slopes--4 percent

Inclusion 3: Heist fine sandy loam, 2 to 8 percent slopes--3 percent

Inclusion 4: Xeric Torriorthents loamy coarse sand, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts

Jericho--Landform: Fan remnants

Armespan--Landform: Fan remnants; geomorphic position: backslope

Inclusion 1--Landform: Fan remnants; geomorphic position: summit

Inclusion 2--Landform: Fan remnants; geomorphic position: backslope; aspect: north

Inclusion 3--Landform: Inset fans

Inclusion 4--Landform: Inset fans

Major Component Description

Jericho Series

Elevation: 5,200 to 6,300 feet

Precipitation: About 8 inches

Air temperature: About 49 degrees

Frost-free season: About 120 days

Surface rock fragments: 45 percent gravel

Surface layer texture: Very gravelly loam

Dominant Present Vegetation

Jericho: Indian ricegrass, black sagebrush, galleta, needleandthread

Armespan: Indian ricegrass, black sagebrush, galleta, needleandthread

Inclusion 1: Indian ricegrass, galleta, shadscale

Inclusion 2: Indian ricegrass, black sagebrush, bluebunch wheatgrass, galleta

Inclusion 3: Indian ricegrass, Wyoming big sagebrush, galleta, spiny hopsage

Inclusion 4: Indian ricegrass, Nevada ephedra, big sagebrush, rubber rabbitbrush

Ecological Site

Jericho: 028AY004NV

Armespan: 028AY004NV

Inclusion 1: 028AY018NV

Inclusion 2: 028AY034NV

Inclusion 3: 028AY028NV

Inclusion 4: 028AY038NV

420--Palinor association

Composition

Major Components

Palinor very gravelly loam, 4 to 15 percent slopes--50 percent

Palinor very gravelly loam, 15 to 30 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Okan gravelly sandy loam, 2 to 4 percent slopes--8 percent

Inclusion 2: Xeric Torriorthents gravelly sandy loam, 8 to 30 percent slopes--4 percent

Inclusion 3: Okan gravelly loam, 2 to 4 percent slopes--2 percent

Inclusion 4: Heist gravelly silt loam, 2 to 4 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts

Palinor--Landform: Ballenas; geomorphic position: summit

Palinor--Landform: Ballenas; geomorphic position: backslope

Inclusion 1--Landform: Inset fans

Inclusion 2--Landform: Pediments; geomorphic position: backslope

Inclusion 3--Landform: Inset fans

Inclusion 4--Landform: Inset fans

Major Component Description**Palinor Series**

Elevation: 5,800 to 6,400 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Palinor Series

Elevation: 5,800 to 6,400 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Dominant Present Vegetation

Palinor: Indian ricegrass, black sagebrush, needleandthread

Palinor: Indian ricegrass, black sagebrush, needleandthread

Inclusion 1: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Inclusion 2: Indian ricegrass, Utah juniper, black sagebrush

Inclusion 3: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 4: Indian ricegrass, winterfat

Ecological Site

Palinor: 028BY011NV

Palinor: 028BY011NV

Inclusion 1: 028BY052NV

Inclusion 2: 028BY083NV

Inclusion 3: 028BY010NV

Inclusion 4: 028BY084NV

421--Palinor-Automal association**Composition****Major Components**

Palinor very gravelly loam, 2 to 15 percent slopes--60 percent

Automal gravelly silt loam, 2 to 8 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Pyrat gravelly sandy loam, 2 to 8 percent slopes--8 percent

Inclusion 2: Heist gravelly sandy loam, 2 to 4 percent slopes--5 percent

Inclusion 3: Okan sandy loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Palinor--Landform: Fan remnants; position on slope: upper

Automal--Landform: Fan remnants; position on slope: lower

Inclusion 1--Landform: Inset fans

Inclusion 2--Landform: Inset fans

Inclusion 3--Landform: Inset fans

Major Component Description**Palinor Series**

Elevation: 5,700 to 7,000 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Automal Series

Elevation: 5,700 to 7,000 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 35 percent gravel

Surface layer texture: Gravelly silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Dominant Present Vegetation

Palinor: Indian ricegrass, black sagebrush, needleandthread
 Automal: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 2: Indian ricegrass, winterfat
 Inclusion 3: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Ecological Site

Palinor: 028BY011NV
 Automal: 028BY011NV
 Inclusion 1: 028BY010NV
 Inclusion 2: 028BY084NV
 Inclusion 3: 028BY052NV

422--Palinor-Zimbob-Okan association***Composition*****Major Components**

Palinor very gravelly loam, 2 to 8 percent slopes--35 percent
 Zimbob very gravelly loam, 8 to 30 percent slopes--30 percent
 Okan sandy loam, 2 to 4 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Automal gravelly silt loam, 2 to 8 percent slopes--10 percent
 Inclusion 2: Zimbob very gravelly silt loam, 8 to 30 percent slopes--4 percent
 Inclusion 3: Rock outcrop--1 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
 Palinor--Landform: Fan remnants
 Zimbob--Landform: Hills
 Okan--Landform: Inset fans
 Inclusion 1--Landform: Fan remnants
 Inclusion 2--Landform: Hills
 Inclusion 3--Landform: Hills

Major Component Description**Palinor Series**

Elevation: 5,800 to 6,700 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Zimbob Series

Elevation: 5,800 to 6,700 feet
 Precipitation: About 12 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 15 percent cobbles; 80 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Okan Series

Elevation: 5,800 to 6,700 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Palinor: Indian ricegrass, black sagebrush, needleandthread
 Zimbob: Indian ricegrass, black sagebrush, needleandthread
 Okan: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 2: Indian ricegrass, Utah juniper, black sagebrush
 Inclusion 3: None

Ecological Site

Palinor: 028BY011NV
 Zimbob: 028BY016NV
 Okan: 028BY010NV
 Inclusion 1: 028BY011NV
 Inclusion 2: 028BY059NV
 Inclusion 3: None

424--Palinor-Hundraw-Okan association***Composition*****Major Components**

Palinor very gravelly loam, 2 to 8 percent slopes--40 percent

Hundraw gravelly fine sandy loam, 8 to 30 percent slopes--25 percent

Okan sandy loam, 2 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Izar extremely gravelly loam, 15 to 50 percent slopes--4 percent

Inclusion 2: Xeric Torriorthents gravelly loam, 15 to 50 percent slopes--4 percent

Inclusion 3: Automal very gravelly sandy loam, 4 to 15 percent slopes--4 percent

Inclusion 4: Xeric Torriorthents clay, 15 to 50 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts

Palinor--Landform: Fan remnants; geomorphic position: summit

Hundraw--Landform: Fan remnants; geomorphic position: backslope

Okan--Landform: Inset fans

Inclusion 1--Landform: Pediments; geomorphic position: backslope

Inclusion 2--Landform: Pediments; geomorphic position: backslope; position on slope: upper

Inclusion 3--Landform: Fan remnants; geomorphic position: summit

Inclusion 4--Landform: Pediments; geomorphic position: backslope

Major Component Description

Palinor Series

Elevation: 6,200 to 6,800 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Hundraw Series

Elevation: 6,200 to 6,800 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 25 percent cobbles; 30 percent gravel

Surface layer texture: Gravelly fine sandy loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks, loess and volcanic ash

Okan Series

Elevation: 6,200 to 6,800 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Palinor: Indian ricegrass, black sagebrush, needleandthread

Hundraw: Indian ricegrass, Utah juniper, black sagebrush, needleandthread

Okan: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Inclusion 1: Indian ricegrass, black sagebrush, needleandthread

Inclusion 2: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Inclusion 3: Indian ricegrass, black sagebrush, needleandthread

Inclusion 4: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Ecological Site

Palinor: 028BY011NV

Hundraw: 028BY083NV

Okan: 028BY052NV

Inclusion 1: 028BY016NV

Inclusion 2: 028BY060NV

Inclusion 3: 028BY011NV

Inclusion 4: 028BY060NV

426--Palinor-Automal-Wintermute association

Composition

Major Components

Palinor very gravelly loam, 8 to 15 percent slopes--35 percent

Automal gravelly silt loam, 4 to 8 percent slopes--30 percent

Wintermute gravelly silt loam, 4 to 8 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Pharo very gravelly loam, 8 to 30 percent slopes--5 percent

Inclusion 2: Urmafot very gravelly loam, 8 to 15 percent

slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts

Palinor--Landform: Fan remnants

Automal--Landform: Fan remnants

Wintermute--Landform: Fan remnants

Inclusion 1--Landform: Pediments; geomorphic position: backslope; position on slope: upper

Inclusion 2--Landform: Pediments; geomorphic position: backslope; position on slope: upper

Major Component Description

Palinor Series

Elevation: 5,200 to 6,800 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Automal Series

Elevation: 5,200 to 6,800 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 35 percent gravel

Surface layer texture: Gravelly silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Wintermute Series

Elevation: 5,200 to 6,800 feet

Precipitation: About 7 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Palinor: Indian ricegrass, black sagebrush, needleandthread

Automal: Indian ricegrass, black sagebrush, needleandthread

Wintermute: Indian ricegrass, bud sagebrush, shadscale, winterfat

Inclusion 1: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Inclusion 2: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Ecological Site

Palinor: 028BY011NV

Automal: 028BY011NV

Wintermute: 028BY075NV

Inclusion 1: 028BY006NV

Inclusion 2: 028BY060NV

429--Palinor-Automal-Palinor, eroded association

Composition

Major Components

Palinor very gravelly loam, 2 to 8 percent slopes--50 percent

Automal gravelly silt loam, 4 to 15 percent slopes--20 percent

Palinor very gravelly loam, 4 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Urmafot very gravelly loam, 4 to 15 percent slopes--6 percent

Inclusion 2: Pyrat gravelly sandy loam, 2 to 8 percent slopes--3 percent

Inclusion 3: Wintermute gravelly silt loam, 2 to 8 percent slopes--3 percent

Inclusion 4: Tulase silt loam, 2 to 4 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts

Palinor--Landform: Fan remnants; geomorphic position: summit

Automal--Landform: Fan remnants; geomorphic position: backslope

Palinor--Landform: Fan remnants; geomorphic position: backslope

Inclusion 1--Landform: Pediments; geomorphic position: backslope; position on slope: upper

Inclusion 2--Landform: Inset fans

Inclusion 3--Landform: Fan remnants; position on slope: lower

Inclusion 4--Landform: Inset fans

Major Component Description

Palinor Series

Elevation: 5,800 to 6,900 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Automal Series

Elevation: 5,800 to 6,900 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 35 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Palinor Series

Elevation: 5,800 to 6,900 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Dominant Present Vegetation

Palinor: Indian ricegrass, black sagebrush, needleandthread
 Automal: Indian ricegrass, black sagebrush, needleandthread
 Palinor: Indian ricegrass, Utah juniper, black sagebrush, needleandthread
 Inclusion 1: Black sagebrush
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, spiny hopsage
 Inclusion 3: Indian ricegrass, bud sagebrush, shadscale, winterfat
 Inclusion 4: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat

Ecological Site

Palinor: 028BY011NV
 Automal: 028BY011NV
 Palinor: 028BY083NV
 Inclusion 1: 028BY006NV
 Inclusion 2: 028BY052NV
 Inclusion 3: 028BY075NV
 Inclusion 4: 028BY045NV

430--Graley-Pioche-Cropper association

Composition

Major Components

Graley very cobbly loam, 8 to 30 percent slopes--40 percent
 Pioche very gravelly sandy loam, 15 to 50 percent slopes--30 percent
 Cropper very cobbly loam, 15 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Chen very gravelly loam, 4 to 15 percent slopes--7 percent
 Inclusion 2: Rock outcrop--3 percent
 Inclusion 3: Simon gravelly loam, 8 to 30 percent slopes--3 percent
 Inclusion 4: Lithic Argixerolls, clayey-skeletal, montmorillonitic, frigid very gravelly loam, 15 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains

Graley--Landform: Mountains; geomorphic position: backslope

Pioche--Landform: Mountains; geomorphic position: backslope; aspect: south

Cropper--Landform: Mountains; geomorphic position: backslope; shape of slope: concave

Inclusion 1--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Inclusion 2--Landform: Mountains; geomorphic position: summit

Inclusion 3--Landform: Mountains; geomorphic position: backslope; shape of slope: concave

Inclusion 4--Landform: Mountains; geomorphic position: backslope; shape of slope: convex; aspect: north

Major Component Description

Graley Series

Elevation: 6,500 to 8,200 feet
 Precipitation: About 12 inches
 Air temperature: About 42 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 40 percent cobbles; 15 percent gravel
 Surface layer texture: Very cobbly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from volcanic rocks

Pioche Series

Elevation: 6,500 to 8,200 feet
 Precipitation: About 12 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 10 percent cobbles; 40 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Residuum derived from volcanic rocks

Cropper Series

Elevation: 6,500 to 8,200 feet
 Precipitation: About 14 inches
 Air temperature: About 42 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 15 percent cobbles; 30 percent gravel
 Surface layer texture: Very cobbly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Graley: Thurber needlegrass, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
 Pioche: Utah juniper, bluebunch wheatgrass, mountain big sagebrush, singleleaf pinyon
 Cropper: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush, singleleaf pinyon
 Inclusion 1: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
 Inclusion 2: None
 Inclusion 3: Thurber needlegrass, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
 Inclusion 4: Thurber needlegrass, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Ecological Site

Graley: 028BY087NV
 Pioche: 028BY062NV
 Cropper: 028BY058NV
 Inclusion 1: 028BY037NV
 Inclusion 2: None
 Inclusion 3: 028BY030NV
 Inclusion 4: 028BY030NV

431--Graley-Chen-Mclvey association***Composition*****Major Components**

Graley stony loam, 8 to 30 percent slopes--35 percent

Chen very gravelly loam, 8 to 30 percent slopes--30 percent

Mclvey very cobbly loam, 15 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Hapgood very gravelly loam, 15 to 50 percent slopes--9 percent

Inclusion 2: Welch gravelly loam, 2 to 8 percent slopes--3 percent

Inclusion 3: Pachic Cryoborolls, fine-loamy, mixed gravelly silt loam, 15 to 50 percent slopes--2 percent

Inclusion 4: Rock outcrop--1 percent

Map Unit Setting

Landscape position: Mountains

Graley--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Chen--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Mclvey--Landform: Mountains; shape of slope: concave

Inclusion 1--Landform: Mountains; shape of slope: concave

Inclusion 2--Landform: Drainageways

Inclusion 3--Landform: Mountains; shape of slope: concave

Inclusion 4--Landform: Mountains; geomorphic position: summit

Major Component Description**Graley Series**

Elevation: 7,000 to 8,200 feet
 Precipitation: About 12 inches
 Air temperature: About 42 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 2 percent stones and boulders; 15 percent cobbles; 15 percent gravel
 Surface layer texture: Stony loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from volcanic rocks

Chen Series

Elevation: 7,000 to 8,200 feet
 Precipitation: About 12 inches
 Air temperature: About 43 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 15 percent cobbles; 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from volcanic rocks

Mclvey Series

Elevation: 7,000 to 8,200 feet

Precipitation: About 14 inches

Air temperature: About 44 degrees

Frost-free season: About 85 days

Surface rock fragments: 10 percent cobbles; 20 percent gravel

Surface layer texture: Very cobbly loam

Drainage class: Well drained

Dominant parent material: Alluvium and colluvium derived from mixed rocks

Dominant Present Vegetation

Graley: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Chen: Idaho fescue, bluebunch wheatgrass, low sagebrush

Mclvey: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Inclusion 1: Idaho fescue, mountain big sagebrush, mountain brome, snowberry

Inclusion 2: Tufted hairgrass

Inclusion 3: Mountain brome

Inclusion 4: None

Ecological Site

Graley: 025XY012NV

Chen: 025XY017NV

Mclvey: 025XY012NV

Inclusion 1: 025XY004NV

Inclusion 2: 025XY005NV

Inclusion 3: 025XY065NV

Inclusion 4: None

440--Lomoiné-Bijorja association***Composition*****Major Components**

Lomoiné very gravelly sandy loam, 8 to 30 percent slopes--40 percent

Bijorja gravelly sandy loam, 8 to 30 percent slopes--30 percent

Lomoiné very gravelly sandy loam, 30 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic gravelly coarse sandy loam, 8 to 30 percent slopes--4 percent

Inclusion 2: Lithic Argixerolls, loamy-skeletal, mixed, mesic gravelly sandy loam, 8 to 30 percent slopes--4 percent

Inclusion 3: Rock outcrop--4 percent

Inclusion 4: Durixerollic Camborthids, loamy-skeletal, mixed, mesic very gravelly loamy coarse sand, 4 to 15 percent slopes--3 percent

Map Unit Setting

Landscape position: Hills

Lomoiné--Landform: Hills; geomorphic position: backslope; position on slope: lower; shape of slope: convex

Bijorja--Landform: Hills; geomorphic position: backslope; shape of slope: concave

Lomoiné--Landform: Hills; geomorphic position: backslope; position on slope: upper; shape of slope: convex

Inclusion 1--Landform: Hills; geomorphic position: summit

Inclusion 2--Landform: Hills; geomorphic position: summit; position on slope: upper

Inclusion 3--Landform: Hills; geomorphic position: summit

Inclusion 4--Landform: Alluvial fans; geomorphic position: backslope

Major Component Description**Lomoiné Series**

Elevation: 5,200 to 7,000 feet

Precipitation: About 8 inches

Air temperature: About 50 degrees

Frost-free season: About 115 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Very gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from granitic rocks

Bijorja Series

Elevation: 5,200 to 7,000 feet

Precipitation: About 8 inches

Air temperature: About 50 degrees

Frost-free season: About 115 days

Surface layer texture: Gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from granitic rocks

Lomoiné Series

Elevation: 5,200 to 7,000 feet

Precipitation: About 8 inches

Air temperature: About 50 degrees

Frost-free season: About 115 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Very gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from granitic rocks

Dominant Present Vegetation

Lomoin: Indian ricegrass, black sagebrush, needleandthread

Bijorja: Indian ricegrass, Wyoming big sagebrush, needleandthread

Lomoin: Indian ricegrass, black sagebrush, needleandthread

Inclusion 1: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Inclusion 2: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Inclusion 3: None

Inclusion 4: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Ecological Site

Lomoin: 028AY013NV

Bijorja: 028BY010NV

Lomoin: 028AY004NV

Inclusion 1: 028BY060NV

Inclusion 2: 028BY006NV

Inclusion 3: None

Inclusion 4: 028BY052NV

460--Okan-Automal-Hundraw association

Composition

Major Components

Okan sandy loam, 2 to 8 percent slopes--40 percent

Automal gravelly silt loam, 4 to 15 percent slopes--25 percent

Hundraw gravelly fine sandy loam, 2 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Palior very gravelly sandy loam, 2 to 8 percent slopes--10 percent

Inclusion 2: Okan sandy loam, 2 to 4 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts

Okan--Landform: Inset fans

Automal--Landform: Fan remnants

Hundraw--Landform: Pediments

Inclusion 1--Landform: Fan remnants

Inclusion 2--Landform: Inset fans

Major Component Description

Okan Series

Elevation: 5,800 to 6,100 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Automal Series

Elevation: 5,800 to 6,100 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 35 percent gravel

Surface layer texture: Gravelly silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Hundraw Series

Elevation: 5,800 to 6,100 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 25 percent cobbles; 30 percent gravel

Surface layer texture: Gravelly fine sandy loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks, loess and volcanic ash

Dominant Present Vegetation

Okan: Indian ricegrass, Wyoming big sagebrush, needleandthread

Automal: Indian ricegrass, black sagebrush, needleandthread

Hundraw: Indian ricegrass, black sagebrush, needleandthread

Inclusion 1: Indian ricegrass, black sagebrush, needleandthread

Inclusion 2: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Ecological Site

Okan: 028BY010NV

Automal: 028BY011NV

Hundraw: 028BY011NV

Inclusion 1: 028BY011NV

Inclusion 2: 028BY052NV

470--Rozara-Cucamungo-Rock outcrop association

Composition

Major Components

Rozara very gravelly loamy coarse sand, 15 to 50 percent slopes--40 percent
Cucamungo very gravelly sandy loam, 15 to 50 percent slopes--25 percent
Rock outcrop--20 percent

Contrasting Inclusions

Inclusion 1: Chen very gravelly sandy loam, 4 to 30 percent slopes--5 percent
Inclusion 2: Hapgood very gravelly sandy loam, 15 to 50 percent slopes--5 percent
Inclusion 3: Typic Cryoborolls, loamy-skeletal, mixed gravelly loamy coarse sand, 15 to 50 percent slopes--5 percent

Map Unit Setting

Landscape position: Mountains

Rozara--Landform: Mountains; geomorphic position: backslope

Cucamungo--Landform: Mountains; geomorphic position: backslope

Rock outcrop--Landform: Mountains

Inclusion 1--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Inclusion 2--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north

Inclusion 3--Landform: Mountains; shape of slope: concave

Major Component Description

Rozara Series

Elevation: 6,600 to 7,700 feet

Precipitation: About 16 inches

Air temperature: About 43 degrees

Frost-free season: About 90 days

Surface rock fragments: 50 percent gravel

Surface layer texture: Very gravelly loamy coarse sand

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from granitic rocks

Cucamungo Series

Elevation: 6,600 to 7,700 feet

Precipitation: About 14 inches

Air temperature: About 44 degrees

Frost-free season: About 90 days

Surface rock fragments: 30 percent cobbles; 20 percent gravel

Surface layer texture: Very gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from granitic rocks

Rock outcrop Miscellaneous Area

Elevation: 6,600 to 7,700 feet

Dominant Present Vegetation

Rozara: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush

Cucamungo: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush, singleleaf pinyon

Rock outcrop: None

Inclusion 1: Thurber needlegrass, bluebunch wheatgrass, low sagebrush

Inclusion 2: Idaho fescue, mountain big sagebrush, mountain brome, snowberry

Inclusion 3: Columbia needlegrass, curlleaf mountainmahogany, mountain brome

Ecological Site

Rozara: 025XY071NV

Cucamungo: 025XY061NV

Rock outcrop: None

Inclusion 1: 028BY037NV

Inclusion 2: 025XY004NV

Inclusion 3: 025XY030NV

471--Cucamungo-Hendap-Rock outcrop association

Composition

Major Components

Cucamungo very gravelly sandy loam, 15 to 50 percent slopes--50 percent

Hendap very stony coarse sandy loam, 15 to 50 percent slopes--20 percent

Rock outcrop--15 percent

Contrasting Inclusions

Inclusion 1: Aridic Argixerolls, coarse-loamy, mixed, mesic very gravelly sandy loam, 2 to 8 percent slopes--5 percent

Inclusion 2: Aridic Argixerolls, loamy-skeletal, mixed, frigid very gravelly coarse sandy loam, 8 to 30 percent slopes--5 percent
 Inclusion 3: Lomoline gravelly loamy coarse sand, 15 to 50 percent slopes--3 percent
 Inclusion 4: Xerollic Durorthids, coarse-loamy, mixed, mesic gravelly sandy loam, 4 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains

Cucamungo--Landform: Mountains; geomorphic position: backslope

Hendap--Landform: Mountains; geomorphic position: summit

Rock outcrop--Landform: Mountains

Inclusion 1--Landform: Fan remnants

Inclusion 2--Landform: Fan remnants

Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: lower

Inclusion 4--Landform: Fan remnants; position on slope: lower

Major Component Description

Cucamungo Series

Elevation: 6,500 to 8,300 feet

Precipitation: About 14 inches

Air temperature: About 44 degrees

Frost-free season: About 90 days

Surface rock fragments: 30 percent cobbles; 20 percent gravel

Surface layer texture: Very gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from granitic rocks

Hendap Series

Elevation: 6,500 to 8,300 feet

Precipitation: About 12 inches

Air temperature: About 47 degrees

Frost-free season: About 100 days

Surface rock fragments: 5 percent cobbles; 30 percent gravel

Surface layer texture: Very stony coarse sandy loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from granitic rocks

Rock outcrop Miscellaneous Area

Elevation: 6,500 to 8,300 feet

Dominant Present Vegetation

Cucamungo: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush, singleleaf pinyon

Hendap: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Rock outcrop: None

Inclusion 1: Thurber needlegrass, big sagebrush, bluebunch wheatgrass

Inclusion 2: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush, needlegrass

Inclusion 3: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Inclusion 4: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Ecological Site

Cucamungo: 028BY058NV

Hendap: 028BY060NV

Rock outcrop: None

Inclusion 1: 028BY007NV

Inclusion 2: 028BY015NV

Inclusion 3: 028BY008NV

Inclusion 4: 028BY052NV

480--Shabliss-Palinor association

Composition

Major Components

Shabliss gravelly fine sandy loam, 4 to 8 percent slopes--55 percent

Palinor very gravelly loam, 4 to 15 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Haploxerollic Durorthids, coarse-loamy, mixed, mesic very gravelly loam, 4 to 15 percent slopes--5 percent

Inclusion 2: Linoyer silt loam, 2 to 8 percent slopes--3 percent

Inclusion 3: Okan sandy loam, 2 to 8 percent slopes--1 percent

Inclusion 4: Pyrat extremely gravelly sandy loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts

Shabliss--Landform: Fan remnants

Palinor--Landform: Fan remnants

Inclusion 1--Landform: Fan remnants

Inclusion 2--Landform: Inset fans

Inclusion 3--Landform: Inset fans

Inclusion 4--Landform: Inset fans

Major Component Description

Shabliss Series

Elevation: 5,600 to 6,800 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Palinor Series

Elevation: 5,600 to 6,800 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Dominant Present Vegetation

Shabliss: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Palinor: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, spiny hopsage
 Inclusion 2: Indian ricegrass, winterfat
 Inclusion 3: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 4: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Ecological Site

Shabliss: 028BY080NV
 Palinor: 028BY011NV
 Inclusion 1: 028BY052NV
 Inclusion 2: 028BY013NV
 Inclusion 3: 028BY010NV
 Inclusion 4: 028BY052NV

485--Shabliss-Parisa-Hunnton association

Composition

Major Components

Shabliss gravelly fine sandy loam, 2 to 8 percent slopes--45 percent
 Parisa gravelly loam, 2 to 8 percent slopes--30 percent

Hunnton silt loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Durixerollic Haplargids, fine-loamy, mixed, mesic loam, 2 to 4 percent slopes--5 percent
 Inclusion 2: Aridic Duric Haploxerolls, fine-loamy, mixed, mesic silt loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Shabliss--Landform: Fan remnants
 Parisa--Landform: Fan remnants
 Hunnton--Landform: Fan remnants; position on slope: lower
 Inclusion 1--Landform: Fan remnants; position on slope: lower
 Inclusion 2--Landform: Inset fans; position on slope: lower

Major Component Description

Shabliss Series

Elevation: 5,700 to 6,800 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Parisa Series

Elevation: 5,700 to 6,800 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 65 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Hunnton Series

Elevation: 5,700 to 6,800 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Shabliss: Indian ricegrass, Wyoming big sagebrush, needleandthread

Parisa: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Hunnton: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat

Ecological Site

Shabliss: 028BY010NV
 Parisa: 028BY010NV
 Hunnton: 028BY010NV
 Inclusion 1: 028BY010NV
 Inclusion 2: 028BY045NV

Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Automal Series

Elevation: 5,700 to 6,700 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 35 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Dominant Present Vegetation

Wintermute: Indian ricegrass, bud sagebrush, shadscale, winterfat
 Automal: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 2: Basin wildrye, big sagebrush, black greasewood
 Inclusion 3: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 4: Winterfat

Ecological Site

Wintermute: 028BY075NV
 Automal: 028BY011NV
 Inclusion 1: 028BY010NV
 Inclusion 2: 028BY028NV
 Inclusion 3: 028BY010NV
 Inclusion 4: 028BY084NV

490--Wintermute-Automal association

Composition

Major Components

Wintermute gravelly silt loam, 2 to 4 percent slopes--75 percent
 Automal gravelly silt loam, 2 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Pyrat gravelly sandy loam, 2 to 4 percent slopes--5 percent
 Inclusion 2: Kunzler silt loam, 2 to 4 percent slopes--3 percent
 Inclusion 3: Jericho gravelly sandy loam, 2 to 8 percent slopes--1 percent
 Inclusion 4: Typic Calciorthids, loamy-skeletal, mixed, mesic very gravelly loam, 2 to 4 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Wintermute--Landform: Fan remnants
 Automal--Landform: Fan remnants
 Inclusion 1--Landform: Inset fans
 Inclusion 2--Landform: Fan skirts
 Inclusion 3--Landform: Fan remnants
 Inclusion 4--Landform: Fan remnants; position on slope: lower

Major Component Description

Wintermute Series

Elevation: 5,700 to 6,700 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly silt loam

492--Wintermute-Peeko-Hundraw association

Composition

Major Components

Wintermute gravelly silt loam, 4 to 15 percent slopes--40 percent
 Peeko gravelly loam, 2 to 8 percent slopes--30 percent
 Hundraw gravelly fine sandy loam, 8 to 30 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Hundraw very gravelly loam, 8 to 30 percent slopes--5 percent
 Inclusion 2: Okan gravelly sandy loam, 2 to 8 percent slopes--5 percent

Inclusion 3: Pyrat gravelly sandy loam, 4 to 15 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts

Wintermute--Landform: Fan remnants

Peeko--Landform: Fan remnants; geomorphic position: summit

Hundraw--Landform: Pediments; geomorphic position: backslope

Inclusion 1--Landform: Pediments; geomorphic position: backslope

Inclusion 2--Landform: Inset fans

Inclusion 3--Landform: Fan remnants; geomorphic position: backslope

Major Component Description

Wintermute Series

Elevation: 6,000 to 6,700 feet

Precipitation: About 7 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Peeko Series

Elevation: 6,000 to 6,700 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 10 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Hundraw Series

Elevation: 6,000 to 6,700 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 25 percent cobbles; 30 percent gravel

Surface layer texture: Gravelly fine sandy loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks, loess and volcanic ash

Dominant Present Vegetation

Wintermute: Indian ricegrass, bud sagebrush, shadscale, winterfat

Peeko: Indian ricegrass, black sagebrush, needleandthread

Hundraw: Indian ricegrass, black sagebrush, needleandthread

Inclusion 1: Indian ricegrass, Utah juniper, Utah juniper, black sagebrush, needleandthread

Inclusion 2: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Inclusion 3: Indian ricegrass, Wyoming big sagebrush, needleandthread

Ecological Site

Wintermute: 028BY075NV

Peeko: 028BY011NV

Hundraw: 028BY016NV

Inclusion 1: 028BY083NV

Inclusion 2: 028BY052NV

Inclusion 3: 028BY010NV

494--Wintermute-Pyrat-Automal association

Composition

Major Components

Wintermute gravelly silt loam, 2 to 4 percent slopes--45 percent

Pyrat gravelly sandy loam, 2 to 4 percent slopes--25 percent

Automal gravelly sandy loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Okan gravelly sandy loam, 2 to 4 percent slopes--5 percent

Inclusion 2: Palino very gravelly sandy loam, 2 to 8 percent slopes--5 percent

Inclusion 3: Automal gravelly loam, 8 to 30 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts

Wintermute--Landform: Fan remnants

Pyrat--Landform: Fan remnants

Automal--Landform: Fan remnants

Inclusion 1--Landform: Inset fans

Inclusion 2--Landform: Fan remnants

Inclusion 3--Landform: Fan remnants; geomorphic position: backslope

Major Component Description

Wintermute Series

Elevation: 5,800 to 6,300 feet

Precipitation: About 7 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Pyrat Series

Elevation: 5,800 to 6,300 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Automal Series

Elevation: 5,800 to 6,300 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 35 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Dominant Present Vegetation

Wintermute: Indian ricegrass, bud sagebrush, shadscale, winterfat
 Pyrat: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Automal: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, spiny hopsage
 Inclusion 2: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 3: Indian ricegrass, black sagebrush, needleandthread

Ecological Site

Wintermute: 028BY075NV
 Pyrat: 028BY010NV
 Automal: 028BY011NV
 Inclusion 1: 028BY052NV
 Inclusion 2: 028BY016NV
 Inclusion 3: 028BY011NV

496--Sodhouse-Linoyer association

Composition

Major Components

Sodhouse gravelly loam, 2 to 8 percent slopes--40 percent
 Sodhouse gravelly loam, dry, 2 to 8 percent slopes--30 percent
 Linoyer gravelly fine sandy loam, 0 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Okan gravelly sandy loam, 0 to 2 percent slopes--9 percent
 Inclusion 2: Palino very gravelly sandy loam, 2 to 8 percent slopes--4 percent
 Inclusion 3: Pyrat gravelly sandy loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Sodhouse--Landform: Fan remnants
 Sodhouse--Landform: Fan remnants
 Linoyer--Landform: Inset fans
 Inclusion 1--Landform: Inset fans
 Inclusion 2--Landform: Fan remnants
 Inclusion 3--Landform: Inset fans

Major Component Description

Sodhouse Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Sodhouse Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Linoyer Series

Elevation: 5,600 to 6,000 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Gravelly fine sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Sodhouse: Indian ricegrass, winterfat

Sodhouse: Indian ricegrass, bud sagebrush, shadscale, winterfat

Linoyer: Indian ricegrass, winterfat

Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 2: Indian ricegrass, black sagebrush, needleandthread

Inclusion 3: Indian ricegrass, Wyoming big sagebrush, needleandthread

Ecological Site

Sodhouse: 028BY084NV

Sodhouse: 028AY075NV

Linoyer: 028BY084NV

Inclusion 1: 028BY010NV

Inclusion 2: 028BY011NV

Inclusion 3: 028BY010NV

497--Sodhouse-Palinor association***Composition*****Major Components**

Sodhouse gravelly loam, 2 to 8 percent slopes--40 percent

Sodhouse gravelly loam, 2 to 8 percent slopes--25 percent

Palinor gravelly loam, 2 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Okan gravelly loam, 0 to 4 percent slopes--5 percent

Inclusion 2: Linoyer silt loam, 0 to 4 percent slopes--5 percent

Inclusion 3: Palinor very gravelly loam, 8 to 30 percent slopes--3 percent

Inclusion 4: Tulase silt loam, 0 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Sodhouse--Landform: Fan remnants

Sodhouse--Landform: Fan remnants

Palinor--Landform: Fan remnants; position on slope: lower

Inclusion 1--Landform: Inset fans

Inclusion 2--Landform: Inset fans

Inclusion 3--Landform: Fan remnants; geomorphic position: backslope

Inclusion 4--Landform: Inset fans

Major Component Description**Sodhouse Series**

Elevation: 5,700 to 5,900 feet

Precipitation: About 7 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Sodhouse Series

Elevation: 5,700 to 5,900 feet

Precipitation: About 7 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Palinor Series

Elevation: 5,700 to 5,900 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Dominant Present Vegetation

Sodhouse: Indian ricegrass, winterfat

Sodhouse: Indian ricegrass, bud sagebrush, shadscale, winterfat

Palinor: Indian ricegrass, black sagebrush, needleandthread

Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 2: Indian ricegrass, winterfat

Inclusion 3: Indian ricegrass, Utah juniper, black sagebrush, needleandthread

Inclusion 4: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat

Ecological Site

Sodhouse: 028BY084NV

Sodhouse: 028AY075NV

Palinor: 028BY011NV

Inclusion 1: 028BY010NV

Inclusion 2: 028BY013NV

Inclusion 3: 028BY083NV

Inclusion 4: 028BY045NV

Surface rock fragments: 40 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Somewhat excessively drained

Dominant parent material: Alluvium derived from limestone and dolomite

Izar Series

Elevation: 6,300 to 7,500 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Very gravelly loam

Drainage class: Somewhat excessively drained

Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

501--Pharo-Izar-Okan association

Composition

Major Components

Pharo gravelly loam, 4 to 15 percent slopes--35 percent

Izar very gravelly loam, 15 to 50 percent slopes--25 percent

Okan sandy loam, 2 to 4 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Xeric Torriorthents very gravelly loam, 2 to 8 percent slopes--5 percent

Inclusion 2: Xeric Torriorthents gravelly loam, 15 to 50 percent slopes--5 percent

Inclusion 3: Eastwell very gravelly sandy loam, 4 to 15 percent slopes--2 percent

Inclusion 4: Izar very gravelly loam, 4 to 15 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts

Pharo--Landform: Fan remnants

Izar--Landform: Pediments; geomorphic position: backslope

Okan--Landform: Inset fans

Inclusion 1--Landform: Pediments; geomorphic position: backslope

Inclusion 2--Landform: Pediments; geomorphic position: backslope

Inclusion 3--Landform: Fan remnants

Inclusion 4--Landform: Pediments; geomorphic position: backslope

Major Component Description

Pharo Series

Elevation: 6,300 to 7,500 feet

Precipitation: About 12 inches

Air temperature: About 46 degrees

Frost-free season: About 100 days

Okan Series

Elevation: 6,300 to 7,500 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Pharo: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Izar: Indian ricegrass, black sagebrush, needleandthread

Okan: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Inclusion 1: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Inclusion 2: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Inclusion 3: Indian ricegrass, black sagebrush, needleandthread

Inclusion 4: Indian ricegrass, black sagebrush, needleandthread

Ecological Site

Pharo: 028BY006NV

Izar: 028BY016NV

Okan: 028BY052NV

Inclusion 1: 028BY006NV

Inclusion 2: 028BY060NV

Inclusion 3: 028BY011NV

Inclusion 4: 028BY011NV

503--Automal-Okan-Wintermute association

Composition

Major Components

Automal gravelly silt loam, 4 to 8 percent slopes--35 percent
 Okan sandy loam, 2 to 8 percent slopes--25 percent
 Wintermute gravelly silt loam, 2 to 8 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Linoyer silt loam, 2 to 4 percent slopes--10 percent
 Inclusion 2: Palinor very gravelly loam, 4 to 15 percent slopes--3 percent
 Inclusion 3: Zimbob very gravelly loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Automal--Landform: Fan remnants; position on slope: upper

Okan--Landform: Inset fans

Wintermute--Landform: Fan remnants; position on slope: lower

Inclusion 1--Landform: Inset fans

Inclusion 2--Landform: Fan remnants; position on slope: upper

Inclusion 3--Landform: Hills

Major Component Description

Automal Series

Elevation: 5,700 to 6,700 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 35 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Okan Series

Elevation: 5,700 to 6,700 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Wintermute Series

Elevation: 5,700 to 6,700 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Automal: Indian ricegrass, black sagebrush, needleandthread
 Okan: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Wintermute: Indian ricegrass, bud sagebrush, shadscale, winterfat
 Inclusion 1: Indian ricegrass, winterfat
 Inclusion 2: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 3: Indian ricegrass, black sagebrush, needleandthread

Ecological Site

Automal: 028BY011NV
 Okan: 028BY010NV
 Wintermute: 028BY075NV
 Inclusion 1: 028BY013NV
 Inclusion 2: 028BY011NV
 Inclusion 3: 028BY011NV

504--Automal-Wintermute association

Composition

Major Components

Automal gravelly silt loam, 2 to 8 percent slopes--65 percent
 Wintermute gravelly silt loam, 2 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Heist gravelly sandy loam, 0 to 4 percent slopes--5 percent
 Inclusion 2: Urmafot very gravelly loam, 4 to 15 percent slopes--5 percent
 Inclusion 3: Okan very gravelly loam, 2 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts

Automal--Landform: Fan remnants; position on slope: upper

Wintermute--Landform: Fan remnants; position on

slope: lower
 Inclusion 1--Landform: Inset fans
 Inclusion 2--Landform: Fan remnants
 Inclusion 3--Landform: Inset fans

Major Component Description

Automal Series

Elevation: 5,900 to 7,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 35 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Wintermute Series

Elevation: 5,900 to 7,000 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Automal: Indian ricegrass, black sagebrush, needleandthread
 Wintermute: Indian ricegrass, bud sagebrush, shadscale, winterfat
 Inclusion 1: Indian ricegrass, winterfat
 Inclusion 2: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Inclusion 3: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Ecological Site

Automal: 028BY011NV
 Wintermute: 028BY075NV
 Inclusion 1: 028BY084NV
 Inclusion 2: 028BY006NV
 Inclusion 3: 028BY052NV

510--Adobe-Hauchee-Hardzem association

Composition

Major Components

Adobe very gravelly silt loam, 30 to 75 percent slopes--45 percent

Hardzem channery loam, 30 to 75 percent slopes--20 percent
 Hauchee very gravelly loam, 30 to 75 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Wardbay very gravelly loam, 30 to 75 percent slopes--6 percent
 Inclusion 2: Hyzen extremely stony loam, 15 to 50 percent slopes--4 percent
 Inclusion 3: Muiral gravelly loam, 30 to 75 percent slopes--3 percent
 Inclusion 4: Halacan very gravelly loam, 15 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains

Adobe--Landform: Mountains; geomorphic position: backslope; shape of slope: convex

Hardzem--Landform: Mountains; geomorphic position: backslope; aspect: north

Hauchee--Landform: Mountains; geomorphic position: backslope

Inclusion 1--Landform: Mountains; geomorphic position: backslope

Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: lower

Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: north

Inclusion 4--Landform: Mountains; geomorphic position: summit

Major Component Description

Adobe Series

Elevation: 7,500 to 9,800 feet
 Precipitation: About 18 inches
 Air temperature: About 42 degrees
 Frost-free season: About 70 days
 Surface rock fragments: 25 percent cobbles; 60 percent gravel
 Surface layer texture: Very gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Hardzem Series

Elevation: 7,500 to 9,800 feet
 Precipitation: About 25 inches
 Air temperature: About 40 degrees
 Frost-free season: About 60 days
 Surface rock fragments: 25 percent cobbles; 45 percent gravel
 Surface layer texture: Channery loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Haunchee Series

Elevation: 7,500 to 9,800 feet
 Precipitation: About 16 inches
 Air temperature: About 42 degrees
 Frost-free season: About 50 days
 Surface rock fragments: 5 percent cobbles; 50 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Adobe: Black sagebrush, bluebunch wheatgrass
 Hardzem: Bluebunch wheatgrass, limber pine, mountain big sagebrush, white fir
 Haunchee: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush
 Inclusion 1: Bluebunch wheatgrass, mountain big sagebrush
 Inclusion 2: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon
 Inclusion 3: Columbia needlegrass, mountain brome, mountain gooseberry
 Inclusion 4: Black sagebrush, bluebunch wheatgrass

Ecological Site

Adobe: 028BY027NV
 Hardzem: 028BY063NV
 Haunchee: 028BY043NV
 Inclusion 1: 028BY070NV
 Inclusion 2: 028BY060NV
 Inclusion 3: 028BY072NV
 Inclusion 4: 028BY048NV

511--Adobe-Wardbay-Hardol association***Composition*****Major Components**

Adobe very gravelly silt loam, 15 to 50 percent slopes--40 percent
 Wardbay very gravelly loam, 15 to 50 percent slopes--30 percent
 Hardol very gravelly silt loam, 30 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--10 percent
 Inclusion 2: Hyzen very gravelly loam, 15 to 50 percent slopes--3 percent
 Inclusion 3: Haunchee gravelly loam, 8 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains

Adobe--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Wardbay--Landform: Mountains; geomorphic position: backslope

Hardol--Landform: Mountains; geomorphic position: backslope; shape of slope: concave

Inclusion 1--Landform: Mountains; geomorphic position: summit

Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: lower

Inclusion 3--Landform: Mountains; geomorphic position: backslope

Major Component Description**Adobe Series**

Elevation: 7,500 to 9,500 feet
 Precipitation: About 18 inches
 Air temperature: About 42 degrees
 Frost-free season: About 70 days
 Surface rock fragments: 25 percent cobbles; 60 percent gravel
 Surface layer texture: Very gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Wardbay Series

Elevation: 7,500 to 9,500 feet
 Precipitation: About 18 inches
 Air temperature: About 42 degrees
 Frost-free season: About 80 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Hardol Series

Elevation: 7,500 to 9,500 feet
 Precipitation: About 20 inches
 Air temperature: About 40 degrees
 Frost-free season: About 60 days
 Surface rock fragments: 10 percent cobbles; 20 percent gravel
 Surface layer texture: Very gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Adobe: Black sagebrush, bluebunch wheatgrass

Wardbay: Bluebunch wheatgrass, mountain big sagebrush

Hardol: Bluebunch wheatgrass, mountain big sagebrush, needlegrass

Inclusion 1: None

Inclusion 2: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Inclusion 3: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush

Ecological Site

Adobe: 028BY048NV

Wardbay: 028BY070NV

Hardol: 028BY085NV

Inclusion 1: None

Inclusion 2: 028BY060NV

Inclusion 3: 028BY043NV

512--Adobe-Cavehill-Wardbay association

Composition

Major Components

Adobe very gravelly silt loam, 15 to 50 percent slopes--40 percent

Cavehill very gravelly silt loam, 15 to 50 percent slopes--30 percent

Wardbay very gravelly loam, 15 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Tecomar very gravelly loam, 15 to 50 percent slopes--5 percent

Inclusion 2: Hyzen very gravelly loam, 15 to 50 percent slopes--5 percent

Inclusion 3: Rock outcrop--3 percent

Inclusion 4: Aridic Calcixerolls, loamy-skeletal, mixed, frigid gravelly silt loam, 15 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains

Adobe--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Cavehill--Landform: Mountains; geomorphic position: backslope; aspect: north

Wardbay--Landform: Mountains; geomorphic position: backslope; shape of slope: concave

Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: lower; shape of slope: convex

Inclusion 2--Landform: Mountains; geomorphic position: summit

Inclusion 3--Landform: Mountains; geomorphic position: summit

Inclusion 4--Landform: Mountains; geomorphic position: backslope; position on slope: lower; shape of slope: concave

Major Component Description

Adobe Series

Elevation: 6,200 to 8,000 feet

Precipitation: About 18 inches

Air temperature: About 42 degrees

Frost-free season: About 70 days

Surface rock fragments: 25 percent cobbles; 60 percent gravel

Surface layer texture: Very gravelly silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Cavehill Series

Elevation: 6,200 to 8,000 feet

Precipitation: About 14 inches

Air temperature: About 44 degrees

Frost-free season: About 80 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Very gravelly silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Wardbay Series

Elevation: 6,200 to 8,000 feet

Precipitation: About 18 inches

Air temperature: About 42 degrees

Frost-free season: About 80 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Adobe: Black sagebrush, bluebunch wheatgrass

Cavehill: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush, singleleaf pinyon

Wardbay: Bluebunch wheatgrass, mountain big sagebrush

Inclusion 1: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Inclusion 2: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Inclusion 3: None

Inclusion 4: Bluebunch wheatgrass, bluegrass, mountain big sagebrush

Ecological Site

Adobe: 028BY027NV
 Cavehill: 028BY058NV
 Wardbay: 028BY070NV
 Inclusion 1: 028BY008NV
 Inclusion 2: 028BY060NV
 Inclusion 3: None
 Inclusion 4: 028BY088NV

520--Haunchee-Muiral-Wardbay association

Composition

Major Components

Haunchee very gravelly loam, 30 to 75 percent slopes--30 percent
 Muiral gravelly loam, 30 to 75 percent slopes--30 percent
 Wardbay very gravelly loam, 30 to 75 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Adobe very gravelly silt loam, 15 to 50 percent slopes--6 percent
 Inclusion 2: Hardzem channery loam, 30 to 75 percent slopes--6 percent
 Inclusion 3: Halacan very gravelly loam, 15 to 50 percent slopes--3 percent

Map Unit Setting

Landscape position: Mountains

Haunchee--Landform: Mountains; geomorphic position: backslope; shape of slope: convex; aspect: south
 Muiral--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
 Wardbay--Landform: Mountains; geomorphic position: backslope
 Inclusion 1--Landform: Mountains; geomorphic position: summit; shape of slope: convex
 Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: north
 Inclusion 3--Landform: Mountains; geomorphic position: summit

Major Component Description

Haunchee Series

Elevation: 7,500 to 9,800 feet
 Precipitation: About 16 inches

Air temperature: About 42 degrees
 Frost-free season: About 50 days
 Surface rock fragments: 5 percent cobbles; 50 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Muiral Series

Elevation: 7,500 to 9,800 feet
 Precipitation: About 18 inches
 Air temperature: About 38 degrees
 Frost-free season: About 50 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Wardbay Series

Elevation: 7,500 to 9,800 feet
 Precipitation: About 18 inches
 Air temperature: About 42 degrees
 Frost-free season: About 80 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Haunchee: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush
 Muiral: Columbia needlegrass, mountain gooseberry
 Wardbay: Bluebunch wheatgrass, mountain big sagebrush
 Inclusion 1: Black sagebrush, bluebunch wheatgrass
 Inclusion 2: Bluebunch wheatgrass, limber pine, mountain big sagebrush, white fir
 Inclusion 3: Black sagebrush, bluebunch wheatgrass

Ecological Site

Haunchee: 028BY043NV
 Muiral: 028BY072NV
 Wardbay: 028BY070NV
 Inclusion 1: 028BY027NV
 Inclusion 2: 028BY063NV
 Inclusion 3: 028BY048NV

530--Wardbay-Adobe-Haunchee association***Composition*****Major Components**

Wardbay very gravelly loam, 30 to 75 percent slopes--35 percent
 Adobe very gravelly silt loam, 30 to 75 percent slopes--30 percent
 Haunchee very gravelly loam, 30 to 75 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Hardol gravelly loam, 15 to 50 percent slopes--5 percent
 Inclusion 2: Muiral gravelly loam, 15 to 50 percent slopes--5 percent
 Inclusion 3: Halacan very gravelly loam, 30 to 75 percent slopes--3 percent
 Inclusion 4: Pachic Cryoborolls, loamy-skeletal, mixed gravelly loam, 15 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains
 Wardbay--Landform: Mountains; geomorphic position: backslope
 Adobe--Landform: Mountains; geomorphic position: summit
 Haunchee--Landform: Mountains; geomorphic position: summit
 Inclusion 1--Landform: Mountains; geomorphic position: backslope; shape of slope: concave
 Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: north
 Inclusion 3--Landform: Mountains; geomorphic position: backslope; shape of slope: convex
 Inclusion 4--Landform: Mountains; geomorphic position: backslope; position on slope: lower; aspect: north

Major Component Description**Wardbay Series**

Elevation: 7,500 to 9,400 feet
 Precipitation: About 18 inches
 Air temperature: About 42 degrees
 Frost-free season: About 80 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Adobe Series

Elevation: 7,500 to 9,400 feet
 Precipitation: About 18 inches
 Air temperature: About 42 degrees

Frost-free season: About 70 days

Surface rock fragments: 25 percent cobbles; 60 percent gravel

Surface layer texture: Very gravelly silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Haunchee Series

Elevation: 7,500 to 9,400 feet

Precipitation: About 16 inches

Air temperature: About 42 degrees

Frost-free season: About 50 days

Surface rock fragments: 5 percent cobbles; 50 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Wardbay: Bluebunch wheatgrass, mountain big sagebrush

Adobe: Black sagebrush, bluebunch wheatgrass

Haunchee: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush

Inclusion 1: Bluebunch wheatgrass, mountain big sagebrush, needlegrass

Inclusion 2: Columbia needlegrass, mountain brome, mountain gooseberry

Inclusion 3: Black sagebrush, bluebunch wheatgrass

Inclusion 4: Bluebunch wheatgrass, mountain big sagebrush, muttongrass, singleleaf pinyon

Ecological Site

Wardbay: 028BY070NV

Adobe: 028BY027NV

Haunchee: 028BY043NV

Inclusion 1: 028BY085NV

Inclusion 2: 028BY072NV

Inclusion 3: 028BY048NV

Inclusion 4: 028BY076NV

532--Onkeyo-Pookaloo-Tecomar association***Composition*****Major Components**

Onkeyo very gravelly silt loam, 15 to 50 percent slopes--35 percent

Pookaloo very gravelly loam, 8 to 30 percent slopes--30 percent

Tecomar extremely gravelly loam, 8 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Haunchee very gravelly loam, 15 to 50 percent slopes--5 percent

Inclusion 2: Aridic Calcixerolls, loamy-skeletal, mixed, frigid gravelly silt loam, 8 to 30 percent slopes--5 percent

Inclusion 3: Aridic Argixerolls, fine, montmorillonitic, frigid gravelly loam, 4 to 15 percent slopes--4 percent

Inclusion 4: Typic Haploxerolls, coarse-loamy, mixed (calcareous), mesic gravelly sandy loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Mountains

Onkeyo--Landform: Mountains; geomorphic position: backslope

Pookaloo--Landform: Mountains; geomorphic position: backslope; aspect: south

Tecomar--Landform: Mountains; geomorphic position: backslope; position on slope: lower

Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: upper

Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: upper; shape of slope: concave

Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: upper

Inclusion 4--Landform: Drainageways

Major Component Description

Onkeyo Series

Elevation: 6,000 to 8,200 feet

Precipitation: About 14 inches

Air temperature: About 44 degrees

Frost-free season: About 90 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Pookaloo Series

Elevation: 6,000 to 8,200 feet

Precipitation: About 12 inches

Air temperature: About 46 degrees

Frost-free season: About 100 days

Surface rock fragments: 50 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Tecomar Series

Elevation: 6,000 to 8,200 feet

Precipitation: About 12 inches

Air temperature: About 46 degrees

Frost-free season: About 100 days

Surface rock fragments: 5 percent cobbles; 60 percent gravel

Surface layer texture: Extremely gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Onkeyo: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Pookaloo: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Tecomar: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Inclusion 1: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush

Inclusion 2: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Inclusion 3: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Inclusion 4: Basin wildrye, big sagebrush, bluegrass, thickspike wheatgrass

Ecological Site

Onkeyo: 028BY096NV

Pookaloo: 028BY060NV

Tecomar: 028BY008NV

Inclusion 1: 028BY043NV

Inclusion 2: 025XY012NV

Inclusion 3: 025XY007NV

Inclusion 4: 028BY082NV

540--Kunzler-Sycomat association

Composition

Major Components

Kunzler loam, 2 to 4 percent slopes--50 percent

Sycomat sandy loam, 2 to 4 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Duffer silt loam, 0 to 2 percent slopes--7 percent

Inclusion 2: Kolda silt loam, 0 to 2 percent slopes--6 percent
 Inclusion 3: Typic Torriorthents, fine-silty, mixed (calcareous), mesic silt loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Kunzler--Landform: Fan skirts; position on slope: upper
 Sycomat--Landform: Fan skirts; position on slope: lower
 Inclusion 1--Landform: Fan skirts
 Inclusion 2--Landform: Fan skirts
 Inclusion 3--Landform: Lake plains

Major Component Description

Kunzler Series

Elevation: 5,600 to 6,300 feet
 Precipitation: About 8 inches
 Air temperature: About 48 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from sedimentary rocks

Sycomat Series

Elevation: 5,600 to 6,300 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Kunzler: Basin wildrye, big sagebrush, black greasewood
 Sycomat: Black greasewood, bottlebrush squirreltail, shadscale
 Inclusion 1: Alkali cordgrass, alkali sacaton, inland saltgrass
 Inclusion 2: Bluegrass, rush, sedge
 Inclusion 3: Alkali sacaton, black greasewood, inland saltgrass

Ecological Site

Kunzler: 028BY028NV
 Sycomat: 028BY074NV
 Inclusion 1: 028BY002NV
 Inclusion 2: 028BY001NV

Inclusion 3: 028BY020NV

541--Kunzler-Sheffit association

Composition

Major Components

Kunzler silt loam, 2 to 4 percent slopes--45 percent
 Sheffit silt loam, 0 to 2 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Tulase silt loam, 2 to 4 percent slopes--8 percent
 Inclusion 2: Blimo loam, 0 to 2 percent slopes--6 percent
 Inclusion 3: Zorravista fine sand, 2 to 15 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
 Kunzler--Landform: Fan skirts
 Sheffit--Landform: Lake plains
 Inclusion 1--Landform: Fan skirts
 Inclusion 2--Landform: Lake plains
 Inclusion 3--Landform: Dunes

Major Component Description

Kunzler Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 48 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from sedimentary rocks

Sheffit Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Moderately well drained
 Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

Kunzler: Basin wildrye, big sagebrush, black greasewood
 Sheffit: Basin wildrye, big sagebrush, black greasewood
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat

Inclusion 2: Indian ricegrass, Wyoming big sagebrush, wheatgrass
 Inclusion 3: Indian ricegrass, big sagebrush, thickspike wheatgrass

Ecological Site

Kunzler: 028BY028NV
 Sheffit: 028BY028NV
 Inclusion 1: 028BY045NV
 Inclusion 2: 028BY014NV
 Inclusion 3: 028BY068NV

550--Urmafot-Bobs-Urmafot, eroded association

Composition

Major Components

Urmafot gravelly loam, 4 to 15 percent slopes--45 percent
 Bobs gravelly loam, 4 to 15 percent slopes--25 percent
 Urmafot gravelly loam, eroded, 15 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Durixerollic Calciorthids, coarse-loamy, mixed, mesic gravelly silt loam, 8 to 30 percent slopes--6 percent
 Inclusion 2: Pachic Haploxerolls, loamy-skeletal, mixed, mesic silt loam, 15 to 50 percent slopes--5 percent
 Inclusion 3: Calciorthidic Haploxerolls, fine-silty, mixed, mesic silt loam, 2 to 8 percent slopes--4 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Urmafot--Landform: Fan remnants
 Bobs--Landform: Fan remnants
 Urmafot--Landform: Fan remnants; geomorphic position: backslope
 Inclusion 1--Landform: Fan remnants; geomorphic position: backslope; position on slope: lower
 Inclusion 2--Landform: Fan remnants; geomorphic position: backslope; shape of slope: concave
 Inclusion 3--Landform: Inset fans

Major Component Description

Urmafot Series

Elevation: 6,100 to 7,700 feet
 Precipitation: About 12 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days

Surface rock fragments: 40 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Bobs Series

Elevation: 6,100 to 7,700 feet
 Precipitation: About 11 inches
 Air temperature: About 44 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 30 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite, loess and volcanic ash

Urmafot Series

Elevation: 6,100 to 7,700 feet
 Precipitation: About 12 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Urmafot: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Bobs: Indian ricegrass, big sagebrush, bluebunch wheatgrass
 Urmafot: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon
 Inclusion 1: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Inclusion 2: Bluebunch wheatgrass, bluegrass, mountain big sagebrush
 Inclusion 3: Basin big sagebrush, basin wildrye, rubber rabbitbrush

Ecological Site

Urmafot: 028BY006NV
 Bobs: 028BY094NV
 Urmafot: 028BY060NV
 Inclusion 1: 028BY006NV
 Inclusion 2: 028BY088NV
 Inclusion 3: 028BY003NV

551--Urmafot-Bobs association***Composition*****Major Components**

Urmafot gravelly loam, 4 to 15 percent slopes--65 percent

Bobs gravelly loam, 4 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Aridic Durixerolls, loamy, mixed, mesic, shallow gravelly silt loam, 4 to 15 percent slopes--5 percent

Inclusion 2: Aridic Durixerolls, loamy, mixed, mesic, shallow loam, 4 to 15 percent slopes--5 percent

Inclusion 3: Durixerollic Camborthids, coarse-loamy, mixed, mesic silt loam, 2 to 8 percent slopes--3 percent

Inclusion 4: Typic Durixerolls, fine-loamy, mixed, mesic silt loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Urmafot--Landform: Fan remnants

Bobs--Landform: Fan remnants

Inclusion 1--Landform: Fan remnants

Inclusion 2--Landform: Fan remnants

Inclusion 3--Landform: Inset fans

Inclusion 4--Landform: Fan remnants

Major Component Description**Urmafot Series**

Elevation: 5,900 to 7,200 feet

Precipitation: About 12 inches

Air temperature: About 47 degrees

Frost-free season: About 100 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Bobs Series

Elevation: 5,900 to 7,200 feet

Precipitation: About 11 inches

Air temperature: About 44 degrees

Frost-free season: About 85 days

Surface rock fragments: 30 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite, loess and volcanic ash

Dominant Present Vegetation

Urmafot: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Bobs: Indian ricegrass, big sagebrush, bluebunch wheatgrass

Inclusion 1: Thurber needlegrass, big sagebrush, bluebunch wheatgrass

Inclusion 2: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Inclusion 3: Thurber needlegrass, big sagebrush, bluebunch wheatgrass

Inclusion 4: Thurber needlegrass, big sagebrush, bluebunch wheatgrass

Ecological Site

Urmafot: 028BY006NV

Bobs: 028BY094NV

Inclusion 1: 028BY007NV

Inclusion 2: 028BY006NV

Inclusion 3: 028BY007NV

Inclusion 4: 028BY007NV

552--Urmafot-Pharo association***Composition*****Major Components**

Urmafot very gravelly loam, 2 to 8 percent slopes--55 percent

Pharo gravelly loam, 2 to 8 percent slopes--30 percent

Contrasting Inclusions

Inclusion 1: Simon very gravelly loam, 8 to 30 percent slopes--6 percent

Inclusion 2: Bobs gravelly loam, 2 to 8 percent slopes--4 percent

Inclusion 3: Urmafot gravelly loam, 8 to 30 percent slopes--4 percent

Inclusion 4: Calciorthidic Haploxerolls, fine-silty, mixed, mesic gravelly loam, 2 to 4 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts

Urmafot--Landform: Fan remnants; position on slope: upper

Pharo--Landform: Fan remnants; position on slope: lower

Inclusion 1--Landform: Fan remnants; geomorphic position: backslope

Inclusion 2--Landform: Fan remnants; position on slope: upper

Inclusion 3--Landform: Pediments; geomorphic position: backslope; position on slope: upper

Inclusion 4--Landform: Inset fans

Major Component Description**Urmafot Series**

Elevation: 6,000 to 6,600 feet
 Precipitation: About 12 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 50 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Pharo Series

Elevation: 6,000 to 6,600 feet
 Precipitation: About 12 inches
 Air temperature: About 46 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Dominant Present Vegetation

Urmafot: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Pharo: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Inclusion 1: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Inclusion 2: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
 Inclusion 3: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon
 Inclusion 4: Basin wildrye, big sagebrush, bluegrass, thickspike wheatgrass

Ecological Site

Urmafot: 028BY006NV
 Pharo: 028BY006NV
 Inclusion 1: 028BY008NV
 Inclusion 2: 028BY096NV
 Inclusion 3: 028BY060NV
 Inclusion 4: 028BY082NV

554--Urmafot-Tecomar association***Composition*****Major Components**

Urmafot very gravelly loam, 8 to 30 percent slopes--45 percent

Tecomar extremely gravelly loam, 8 to 30 percent slopes--20 percent
 Urmafot very gravelly loam, 15 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Bobs gravelly loam, 8 to 30 percent slopes--5 percent
 Inclusion 2: Tulase silt loam, 2 to 5 percent slopes--5 percent
 Inclusion 3: Automal very gravelly loam, 15 to 50 percent slopes--5 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
 Urmafot--Landform: Fan remnants
 Tecomar--Landform: Hills; geomorphic position: summit
 Urmafot--Landform: Fan remnants; geomorphic position: backslope
 Inclusion 1--Landform: Fan remnants; position on slope: upper
 Inclusion 2--Landform: Inset fans
 Inclusion 3--Landform: Fan remnants; geomorphic position: backslope; position on slope: lower

Major Component Description**Urmafot Series**

Elevation: 5,900 to 6,200 feet
 Precipitation: About 12 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 50 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Tecomar Series

Elevation: 5,900 to 6,500 feet
 Precipitation: About 12 inches
 Air temperature: About 46 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 5 percent cobbles; 60 percent gravel
 Surface layer texture: Extremely gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Urmafot Series

Elevation: 5,900 to 6,200 feet
 Precipitation: About 12 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days

Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Urmafot: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Tecomar: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Urmafot: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon
 Inclusion 1: Indian ricegrass, big sagebrush, bluebunch wheatgrass
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat
 Inclusion 3: Indian ricegrass, black sagebrush, needleandthread

Ecological Site

Urmafot: 028BY006NV
 Tecomar: 028BY008NV
 Urmafot: 028BY060NV
 Inclusion 1: 028BY094NV
 Inclusion 2: 028BY045NV
 Inclusion 3: 028BY016NV

561--Palinor-Urmafot-Palinor, steep association

Composition

Major Components

Palinor very gravelly loam, 4 to 15 percent slopes--50 percent
 Urmafot very gravelly loam, 4 to 15 percent slopes--20 percent
 Palinor very gravelly loam, 15 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Pyrat gravelly sandy loam, 4 to 15 percent slopes--5 percent
 Inclusion 2: Urmafot gravelly loam, 15 to 50 percent slopes--5 percent
 Inclusion 3: Shabliss gravelly loam, 2 to 8 percent slopes--3 percent
 Inclusion 4: Urmafot very gravelly loam, 8 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Palinor--Landform: Fan remnants; position on slope: lower
 Urmafot--Landform: Fan remnants; position on slope: upper
 Palinor--Landform: Fan remnants; geomorphic position: backslope
 Inclusion 1--Landform: Fan remnants; position on slope: lower
 Inclusion 2--Landform: Fan remnants; geomorphic position: backslope
 Inclusion 3--Landform: Fan remnants
 Inclusion 4--Landform: Fan remnants; geomorphic position: backslope; position on slope: upper

Major Component Description

Palinor Series

Elevation: 5,800 to 6,500 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Urmafot Series

Elevation: 6,500 to 7,500 feet
 Precipitation: About 12 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 50 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Palinor Series

Elevation: 5,800 to 6,500 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Dominant Present Vegetation

Palinor: Indian ricegrass, black sagebrush, needleandthread
 Urmafot: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Palinor: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 2: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Inclusion 3: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 4: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Ecological Site

Palinor: 028BY011NV
 Urmafot: 028BY006NV
 Palinor: 028BY011NV
 Inclusion 1: 028BY010NV
 Inclusion 2: 028BY008NV
 Inclusion 3: 028BY080NV
 Inclusion 4: 028BY060NV

562--Bobs very gravelly loam, 2 to 8 percent slopes

Composition

Major Components

Bobs very gravelly loam, 2 to 8 percent slopes--85 percent

Contrasting Inclusions

Inclusion 1: Bobs very gravelly loam, 8 to 30 percent slopes--8 percent
 Inclusion 2: Tulasie silt loam, 0 to 4 percent slopes--5 percent
 Inclusion 3: Calciorthidic Haploxerolls, fine-silty, mixed, mesic silt loam, 0 to 4 percent slopes--1 percent
 Inclusion 4: Palinor very gravelly sandy loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Bobs--Landform: Fan remnants; geomorphic position: summit
 Inclusion 1--Landform: Fan remnants; geomorphic position: backslope
 Inclusion 2--Landform: Inset fans
 Inclusion 3--Landform: Inset fans
 Inclusion 4--Landform: Fan remnants; geomorphic position: summit

Major Component Description

Bobs Series

Elevation: 5,600 to 7,700 feet
 Precipitation: About 11 inches
 Air temperature: About 44 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite, loess and volcanic ash

Dominant Present Vegetation

Bobs: Indian ricegrass, big sagebrush, bluebunch wheatgrass
 Inclusion 1: Indian ricegrass, big sagebrush, bluebunch wheatgrass
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat
 Inclusion 3: Basin big sagebrush, basin wildrye, rubber rabbitbrush
 Inclusion 4: Indian ricegrass, black sagebrush, needleandthread

Ecological Site

Bobs: 028BY094NV
 Inclusion 1: 028BY094NV
 Inclusion 2: 028BY045NV
 Inclusion 3: 028BY003NV
 Inclusion 4: 028BY011NV

563--Bobs-Pyrat association

Composition

Major Components

Bobs cobbly loam, 4 to 15 percent slopes--60 percent
 Pyrat very stony sandy loam, 4 to 15 percent slopes--30 percent

Contrasting Inclusions

Inclusion 1: Aridic Calcixerolls, loamy-skeletal, mixed, mesic stony loam, 4 to 15 percent slopes--5 percent
 Inclusion 2: Tosser very gravelly sandy loam, 2 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Bobs--Landform: Fan remnants
 Pyrat--Landform: Alluvial fans
 Inclusion 1--Landform: Alluvial fans
 Inclusion 2--Landform: Beach terraces

Major Component Description**Bobs Series**

Elevation: 5,600 to 7,700 feet
 Precipitation: About 11 inches
 Air temperature: About 44 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Cobbly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite, loess and volcanic ash

Pyrat Series

Elevation: 5,600 to 7,700 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Very stony sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Bobs: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
 Pyrat: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
 Inclusion 1: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
 Inclusion 2: Indian ricegrass, black sagebrush, needleandthread

Ecological Site

Bobs: 028BY007NV
 Pyrat: 028BY007NV
 Inclusion 1: 028BY007NV
 Inclusion 2: 028BY011NV

575--Pookaloo-Cavehill-Rock outcrop association**Composition****Major Components**

Pookaloo very gravelly loam, 15 to 50 percent slopes--40 percent
 Cavehill very gravelly silt loam, 15 to 50 percent slopes--30 percent
 Rock outcrop--15 percent

Contrasting Inclusions

Inclusion 1: Tecomar very gravelly loam, 15 to 50 percent slopes--5 percent

Inclusion 2: Haunchee gravelly loam, 15 to 50 percent slopes--4 percent
 Inclusion 3: Bobs gravelly loam, 4 to 15 percent slopes--3 percent
 Inclusion 4: Cavehill very gravelly silt loam, 15 to 50 percent slopes--3 percent

Map Unit Setting

Landscape position: Mountains

Pookaloo--Landform: Mountains; geomorphic position: backslope; aspect: south

Cavehill--Landform: Mountains; geomorphic position: backslope; aspect: north

Rock outcrop--Landform: Mountains

Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: lower

Inclusion 2--Landform: Mountains; geomorphic position: summit; position on slope: upper

Inclusion 3--Landform: Fan remnants

Inclusion 4--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: north

Major Component Description**Pookaloo Series**

Elevation: 5,400 to 8,800 feet
 Precipitation: About 12 inches
 Air temperature: About 46 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 50 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Cavehill Series

Elevation: 5,400 to 8,800 feet
 Precipitation: About 14 inches
 Air temperature: About 44 degrees
 Frost-free season: About 80 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Very gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Rock outcrop Miscellaneous Area

Elevation: 5,400 to 8,800 feet

Dominant Present Vegetation

Pookaloo: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Cavehill: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush, singleleaf pinyon
 Rock outcrop: None
 Inclusion 1: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Inclusion 2: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush
 Inclusion 3: Indian ricegrass, big sagebrush, bluebunch wheatgrass
 Inclusion 4: Utah juniper, bluebunch wheatgrass, mountain big sagebrush, singleleaf pinyon

Ecological Site

Pookaloo: 028BY060NV
 Cavehill: 028BY058NV
 Rock outcrop: None
 Inclusion 1: 028BY008NV
 Inclusion 2: 028BY043NV
 Inclusion 3: 028BY094NV
 Inclusion 4: 028BY062NV

576--Pookaloo-Tecomar-Onkeyo association

Composition

Major Components

Pookaloo very gravelly loam, 15 to 50 percent slopes--35 percent
 Tecomar extremely gravelly loam, 15 to 50 percent slopes--30 percent
 Onkeyo very gravelly silt loam, 8 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Zimbob very gravelly loam, 8 to 30 percent slopes--6 percent
 Inclusion 2: Bobs gravelly silt loam, 4 to 15 percent slopes--4 percent
 Inclusion 3: Rock outcrop--3 percent
 Inclusion 4: Aridic Calcixerolls, loamy-skeletal, carbonatic, mesic gravelly loam, 2 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains

Pookaloo--Landform: Mountains; geomorphic position: summit; aspect: north

Tecomar--Landform: Mountains; geomorphic position: summit; aspect: south

Onkeyo--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north

Inclusion 1--Landform: Mountains; geomorphic position:

backslope; position on slope: lower

Inclusion 2--Landform: Fan remnants

Inclusion 3--Landform: Mountains; geomorphic position: summit

Inclusion 4--Landform: Drainageways

Major Component Description

Pookaloo Series

Elevation: 6,200 to 8,000 feet

Precipitation: About 12 inches

Air temperature: About 46 degrees

Frost-free season: About 100 days

Surface rock fragments: 50 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Tecomar Series

Elevation: 6,200 to 8,000 feet

Precipitation: About 12 inches

Air temperature: About 46 degrees

Frost-free season: About 100 days

Surface rock fragments: 5 percent cobbles; 60 percent gravel

Surface layer texture: Extremely gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Onkeyo Series

Elevation: 6,200 to 8,000 feet

Precipitation: About 14 inches

Air temperature: About 44 degrees

Frost-free season: About 90 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Pookaloo: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Tecomar: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Onkeyo: Indian ricegrass, bluebunch wheatgrass, mountain big sagebrush

Inclusion 1: Indian ricegrass, black sagebrush, needleandthread

Inclusion 2: Indian ricegrass, big sagebrush, bluebunch wheatgrass

Inclusion 3: None

Inclusion 4: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat

Ecological Site

Pookaloo: 028BY060NV

Tecomar: 028BY008NV

Onkeyo: 028BY079NV

Inclusion 1: 028BY016NV

Inclusion 2: 028BY094NV

Inclusion 3: None

Inclusion 4: 028BY045NV

582--Sheffit-Katelana association

Composition

Major Components

Sheffit fine sandy loam, 0 to 2 percent slopes--50 percent

Sheffit sandy loam, 0 to 2 percent slopes--30 percent

Katelana silt loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Kawich fine sand, 2 to 8 percent slopes--2 percent

Inclusion 2: Katelana silt loam, 0 to 2 percent slopes--2 percent

Inclusion 3: Cumulic Endoaquolls, fine-silty, mixed (calcareous), mesic silt loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins

Sheffit--Landform: Lake plains

Sheffit--Landform: Lake plains

Katelana--Landform: Lake plains

Inclusion 1--Landform: Dunes

Inclusion 2--Landform: Lake plains

Inclusion 3--Landform: Lake plains

Major Component Description

Sheffit Series

Elevation: 5,500 to 5,600 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Fine sandy loam

Drainage class: Moderately well drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Sheffit Series

Elevation: 5,500 to 5,600 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Sandy loam

Drainage class: Moderately well drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Katelana Series

Elevation: 5,500 to 5,600 feet

Precipitation: About 7 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

Sheffit: Basin wildrye, big sagebrush, creeping wildrye

Sheffit: Basin wildrye, big sagebrush, black greasewood

Katelana: Black greasewood, bottlebrush squirreltail, shadscale

Inclusion 1: Indian ricegrass, big sagebrush, thickspike wheatgrass

Inclusion 2: Black greasewood, bottlebrush squirreltail, shadscale

Inclusion 3: Bluegrass, rush, sedge

Ecological Site

Sheffit: 028AY025NV

Sheffit: 028BY028NV

Katelana: 028BY074NV

Inclusion 1: 028BY068NV

Inclusion 2: 028BY074NV

Inclusion 3: 028BY001NV

590--Upatad-Segura association

Composition

Major Components

Upatad very gravelly silt loam, 15 to 50 percent slopes--50 percent

Segura very cobbly loam, 15 to 50 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Aridic Argixerolls, loamy-skeletal, mixed, mesic very gravelly loam, 8 to 30 percent slopes--5 percent

Inclusion 2: Pioche very gravelly loam, 8 to 30 percent slopes--5 percent

Map Unit Setting

Landscape position: Mountains

Upatad--Landform: Mountains; geomorphic position: backslope; aspect: north

Segura--Landform: Mountains; geomorphic position: summit

Inclusion 1--Landform: Mountains; geomorphic position: backslope

Inclusion 2--Landform: Mountains; geomorphic position: backslope

Major Component Description**Upatad Series**

Elevation: 6,100 to 7,300 feet

Precipitation: About 12 inches

Air temperature: About 47 degrees

Frost-free season: About 100 days

Surface rock fragments: 80 percent gravel

Surface layer texture: Very gravelly silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks

Segura Series

Elevation: 6,100 to 7,300 feet

Precipitation: About 14 inches

Air temperature: About 45 degrees

Frost-free season: About 90 days

Surface rock fragments: 5 percent cobbles; 20 percent gravel

Surface layer texture: Very cobbly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Upatad: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Segura: Mountain big sagebrush

Inclusion 1: Thurber needlegrass, big sagebrush, bluebunch wheatgrass

Inclusion 2: Utah juniper, bluebunch wheatgrass, mountain big sagebrush, singleleaf pinyon

Ecological Site

Upatad: 028BY060NV

Segura: 028BY087NV

Inclusion 1: 028BY007NV

Inclusion 2: 028BY062NV

600--Onkeyo-Amene-Pookaloo association**Composition****Major Components**

Onkeyo very gravelly silt loam, 15 to 50 percent slopes--35 percent

Amene very gravelly silt loam, 15 to 50 percent slopes--25 percent

Pookaloo very gravelly loam, 15 to 50 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Adobe very gravelly silt loam, 15 to 50 percent slopes--8 percent

Inclusion 2: Haunchee gravelly loam, 15 to 50 percent slopes--3 percent

Inclusion 3: Typic Calcixerolls, loamy-skeletal, carbonatic, mesic gravelly silt loam, 4 to 15 percent slopes--2 percent

Inclusion 4: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Onkeyo--Landform: Mountains; geomorphic position: backslope

Amene--Landform: Mountains; geomorphic position: backslope; shape of slope: convex

Pookaloo--Landform: Mountains; geomorphic position: backslope; aspect: south

Inclusion 1--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Inclusion 2--Landform: Mountains; geomorphic position: backslope

Inclusion 3--Landform: Drainageways

Inclusion 4--Landform: Mountains

Major Component Description**Onkeyo Series**

Elevation: 6,800 to 9,200 feet

Precipitation: About 14 inches

Air temperature: About 44 degrees

Frost-free season: About 90 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Amene Series

Elevation: 6,800 to 9,200 feet

Precipitation: About 14 inches

Air temperature: About 44 degrees

Frost-free season: About 80 days

Surface rock fragments: 1 percent stones and boulders; 2 percent cobbles; 30 percent gravel

Surface layer texture: Very gravelly silt loam

Drainage class: Well drained

Dominant parent material: Residuum derived from limestone and dolomite

Pookaloo Series

Elevation: 6,800 to 9,200 feet

Precipitation: About 12 inches

Air temperature: About 46 degrees

Frost-free season: About 100 days

Surface rock fragments: 50 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Onkeyo: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Amene: Indian ricegrass, bluebunch wheatgrass, mountain big sagebrush

Pookaloo: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Inclusion 1: Black sagebrush, bluebunch wheatgrass

Inclusion 2: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush

Inclusion 3: Thurber needlegrass, basin big sagebrush, bluebunch wheatgrass

Inclusion 4: None

Ecological Site

Onkeyo: 028BY096NV

Amene: 028BY079NV

Pookaloo: 028BY060NV

Inclusion 1: 028BY027NV

Inclusion 2: 028BY043NV

Inclusion 3: 028BY007NV

Inclusion 4: None

610--Wintermute-Eastwell association***Composition*****Major Components**

Wintermute gravelly silt loam, 2 to 8 percent slopes--50 percent

Eastwell gravelly sandy loam, 4 to 15 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Durixerollic Camborthids, coarse-loamy, mixed, mesic gravelly loam, 2 to 8 percent slopes--5 percent

Inclusion 2: Okan gravelly sandy loam, 2 to 8 percent slopes--3 percent

Inclusion 3: Shabliss gravelly fine sandy loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Wintermute--Landform: Fan remnants; geomorphic position: summit; position on slope: lower

Eastwell--Landform: Fan remnants; geomorphic position: summit; position on slope: upper

Inclusion 1--Landform: Fan remnants; geomorphic position: summit; position on slope: lower

Inclusion 2--Landform: Inset fans

Inclusion 3--Landform: Fan remnants

Major Component Description**Wintermute Series**

Elevation: 5,700 to 6,200 feet

Precipitation: About 7 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Eastwell Series

Elevation: 6,200 to 6,600 feet

Precipitation: About 8 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface rock fragments: 65 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Wintermute: Indian ricegrass, bud sagebrush, shadscale, winterfat

Eastwell: Indian ricegrass, black sagebrush, needleandthread

Inclusion 1: Indian ricegrass, bud sagebrush, shadscale, winterfat

Inclusion 2: Indian ricegrass, Wyoming big sagebrush, spiny hopsage
 Inclusion 3: Indian ricegrass, Wyoming big sagebrush, needleandthread

Ecological Site

Wintermute: 028BY075NV
 Eastwell: 028BY011NV
 Inclusion 1: 028BY075NV
 Inclusion 2: 028BY052NV
 Inclusion 3: 028BY010NV

614--Wintermute-Eastwell-Zerk association

Composition

Major Components

Wintermute gravelly sandy loam, 4 to 15 percent slopes--55 percent
 Eastwell gravelly sandy loam, 4 to 15 percent slopes--25 percent
 Zerk gravelly loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Okan gravelly sandy loam, 2 to 8 percent slopes--3 percent
 Inclusion 2: Typic Torriorthents, loamy-skeletal, mixed (calcareous), mesic gravelly sandy loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Wintermute--Landform: Fan remnants; position on slope: lower
 Eastwell--Landform: Fan remnants; position on slope: upper
 Zerk--Landform: Fan remnants; position on slope: lower
 Inclusion 1--Landform: Inset fans
 Inclusion 2--Landform: Inset fans

Major Component Description

Wintermute Series

Elevation: 5,800 to 6,200 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Eastwell Series

Elevation: 6,200 to 6,700 feet
 Precipitation: About 8 inches
 Air temperature: About 48 degrees

Frost-free season: About 110 days
 Surface rock fragments: 65 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Zerk Series

Elevation: 5,800 to 6,200 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Wintermute: Indian ricegrass, bud sagebrush, shadscale, winterfat
 Eastwell: Indian ricegrass, black sagebrush, needleandthread
 Zerk: Indian ricegrass, winterfat
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, spiny hopsage
 Inclusion 2: Indian ricegrass, fourwing saltbush, spiny hopsage

Ecological Site

Wintermute: 028BY075NV
 Eastwell: 028BY011NV
 Zerk: 028BY084NV
 Inclusion 1: 028BY052NV
 Inclusion 2: 028BY078NV

617--Wintermute-Zerk-Loray association

Composition

Major Components

Wintermute gravelly silt loam, 2 to 8 percent slopes--35 percent
 Zerk gravelly loam, 2 to 8 percent slopes--30 percent
 Loray gravelly loam, 2 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Okan gravelly sandy loam, 0 to 4 percent slopes--6 percent
 Inclusion 2: Tosser gravelly sandy loam, 2 to 8 percent slopes--4 percent
 Inclusion 3: Linoyer silt loam, 2 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts

Wintermute--Landform: Fan remnants; position on slope: upper

Zerk--Landform: Fan remnants; position on slope: lower

Loray--Landform: Fan skirts

Inclusion 1--Landform: Inset fans

Inclusion 2--Landform: Fan remnants

Inclusion 3--Landform: Inset fans

Major Component Description

Wintermute Series

Elevation: 5,600 to 6,200 feet

Precipitation: About 7 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Zerk Series

Elevation: 5,600 to 6,200 feet

Precipitation: About 7 inches

Air temperature: About 47 degrees

Frost-free season: About 120 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Loray Series

Elevation: 5,600 to 6,200 feet

Precipitation: About 6 inches

Air temperature: About 50 degrees

Frost-free season: About 110 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Somewhat excessively drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Wintermute: Indian ricegrass, bud sagebrush, shadscale, winterfat

Zerk: Indian ricegrass, winterfat

Loray: Indian ricegrass, bud sagebrush, shadscale

Inclusion 1: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Inclusion 2: Indian ricegrass, black sagebrush, needleandthread

Inclusion 3: Indian ricegrass, winterfat

Ecological Site

Wintermute: 028BY075NV

Zerk: 028BY084NV

Loray: 028AY012NV

Inclusion 1: 028BY052NV

Inclusion 2: 028BY016NV

Inclusion 3: 028BY013NV

620--Atlow association

Composition

Major Components

Atlow very gravelly loam, 15 to 50 percent slopes--65 percent

Atlow very gravelly loam, 4 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--10 percent

Inclusion 2: Okan sandy loam, 0 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Hills

Atlow--Landform: Hills; geomorphic position: backslope

Atlow--Landform: Hills; geomorphic position: summit

Inclusion 1--Landform: Hills; geomorphic position: summit

Inclusion 2--Landform: Drainageways

Major Component Description

Atlow Series

Elevation: 5,700 to 6,500 feet

Precipitation: About 9 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 15 percent cobbles; 35 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum derived from volcanic rocks

Atlow Series

Elevation: 5,700 to 6,500 feet

Precipitation: About 9 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 15 percent cobbles; 35 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum derived from volcanic rocks

Dominant Present Vegetation

Atlow: Indian ricegrass, Thurber needlegrass, black sagebrush

Atlow: Indian ricegrass, Thurber needlegrass, black sagebrush

Inclusion 1: None

Inclusion 2: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Ecological Site

Atlow: 028BY089NV

Atlow: 028BY089NV

Inclusion 1: None

Inclusion 2: 028BY052NV

631--Eastwell-Wintermute-Okan association

Composition

Major Components

Eastwell gravelly sandy loam, 2 to 8 percent slopes--55 percent

Wintermute gravelly silt loam, 2 to 8 percent slopes--15 percent

Okan sandy loam, 2 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Automal gravelly loam, 0 to 2 percent slopes--9 percent

Inclusion 2: Palinor gravelly sandy loam, 2 to 8 percent slopes--4 percent

Inclusion 3: Typic Paleargids, fine, montmorillonitic, mesic gravelly loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Eastwell--Landform: Fan remnants; position on slope: upper

Wintermute--Landform: Fan remnants; position on slope: lower

Okan--Landform: Inset fans

Inclusion 1--Landform: Fan remnants

Inclusion 2--Landform: Fan remnants; position on slope: upper

Inclusion 3--Landform: Fan remnants; geomorphic position: summit

Major Component Description

Eastwell Series

Elevation: 6,200 to 6,700 feet

Precipitation: About 8 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface rock fragments: 65 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Wintermute Series

Elevation: 5,800 to 6,200 feet

Precipitation: About 7 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Okan Series

Elevation: 5,800 to 6,700 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Eastwell: Indian ricegrass, black sagebrush, needleandthread

Wintermute: Indian ricegrass, bud sagebrush, shadscale, winterfat

Okan: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Inclusion 1: Indian ricegrass, black sagebrush, needleandthread

Inclusion 2: Indian ricegrass, black sagebrush, needleandthread

Inclusion 3: Indian ricegrass, needleandthread, pigmy sagebrush

Ecological Site

Eastwell: 028BY011NV

Wintermute: 028BY075NV

Okan: 028BY052NV

Inclusion 1: 028BY011NV

Inclusion 2: 028BY011NV

Inclusion 3: 028BY040NV

632--Eastwell-Zafod association

Composition

Major Components

Eastwell gravelly sandy loam, 4 to 15 percent slopes--50 percent

Zafod gravelly coarse sandy loam, 4 to 15 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Pyrat gravelly sandy loam, 2 to 8 percent slopes--5 percent

Inclusion 2: Wintermute gravelly silt loam, 2 to 8 percent slopes--5 percent

Inclusion 3: Urmatot gravelly silt loam, 15 to 30 percent slopes--3 percent

Inclusion 4: Xerollic Durargids, loamy-skeletal, mixed, mesic very gravelly loam, 4 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Eastwell--Landform: Fan remnants

Zafod--Landform: Fan remnants

Inclusion 1--Landform: Fan remnants; position on slope: lower

Inclusion 2--Landform: Fan remnants; position on slope: lower

Inclusion 3--Landform: Fan remnants; position on slope: upper

Inclusion 4--Landform: Fan remnants; geomorphic position: backslope; aspect: south

Major Component Description

Eastwell Series

Elevation: 5,200 to 6,300 feet

Precipitation: About 8 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface rock fragments: 65 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Zafod Series

Elevation: 5,200 to 6,300 feet

Precipitation: About 9 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Gravelly coarse sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from granitic rocks

Dominant Present Vegetation

Eastwell: Indian ricegrass, black sagebrush, needleandthread

Zafod: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 2: Indian ricegrass, bud sagebrush, shadscale, winterfat

Inclusion 3: Black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Inclusion 4: Indian ricegrass, black sagebrush, needleandthread

Ecological Site

Eastwell: 028BY011NV

Zafod: 028BY010NV

Inclusion 1: 028BY010NV

Inclusion 2: 028BY075NV

Inclusion 3: 028BY090NV

Inclusion 4: 028BY011NV

634--Eastwell-Shabliss-Izar association

Composition

Major Components

Eastwell gravelly sandy loam, 2 to 8 percent slopes--40 percent

Shabliss gravelly fine sandy loam, 2 to 8 percent slopes--35 percent

Izar very gravelly loam, 4 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Xeric Torriorthents gravelly sandy loam, 15 to 50 percent slopes--5 percent

Inclusion 2: Okan loam, 2 to 4 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts

Eastwell--Landform: Fan remnants

Shabliss--Landform: Fan remnants

Izar--Landform: Pediments

Inclusion 1--Landform: Pediments; geomorphic position: backslope

Inclusion 2--Landform: Inset fans

Major Component Description

Eastwell Series

Elevation: 6,300 to 6,800 feet
 Precipitation: About 8 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 65 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Shabliss Series

Elevation: 6,300 to 6,800 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Izar Series

Elevation: 6,300 to 6,800 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Very gravelly loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Eastwell: Indian ricegrass, black sagebrush, needleandthread
 Shabliss: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Izar: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 1: Utah juniper, black sagebrush
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread

Ecological Site

Eastwell: 028BY011NV
 Shabliss: 028BY010NV
 Izar: 028BY011NV
 Inclusion 1: 028BY083NV

Inclusion 2: 028BY010NV

636--Eastwell-Hundraw-Okan association

Composition

Major Components

Eastwell very gravelly loam, 2 to 8 percent slopes--45 percent
 Hundraw gravelly fine sandy loam, 4 to 15 percent slopes--25 percent
 Okan sandy loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Okan loam, 2 to 8 percent slopes--5 percent
 Inclusion 2: Urmafot very gravelly loam, 4 to 15 percent slopes--5 percent
 Inclusion 3: Palinor very gravelly loam, 4 to 15 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Eastwell--Landform: Fan remnants; geomorphic position: summit
 Hundraw--Landform: Pediments; geomorphic position: backslope
 Okan--Landform: Inset fans
 Inclusion 1--Landform: Inset fans
 Inclusion 2--Landform: Fan remnants
 Inclusion 3--Landform: Fan remnants; geomorphic position: summit

Major Component Description

Eastwell Series

Elevation: 6,200 to 6,800 feet
 Precipitation: About 8 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 65 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Hundraw Series

Elevation: 6,200 to 6,800 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 25 percent cobbles; 30 percent gravel
 Surface layer texture: Gravelly fine sandy loam

Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from volcanic rocks, loess and volcanic ash

Okan Series

Elevation: 6,200 to 6,800 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed
 rocks, loess and volcanic ash

Dominant Present Vegetation

Eastwell: Indian ricegrass, black sagebrush,
 needleandthread
 Hundraw: Utah juniper
 Okan: Indian ricegrass, Wyoming big sagebrush, spiny
 hopsage
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush,
 needleandthread
 Inclusion 2: Indian ricegrass, black sagebrush,
 bluebunch wheatgrass
 Inclusion 3: Indian ricegrass, black sagebrush,
 needleandthread

Ecological Site

Eastwell: 028BY011NV
 Hundraw: 028BY083NV
 Okan: 028BY052NV
 Inclusion 1: 028BY010NV
 Inclusion 2: 028BY006NV
 Inclusion 3: 028BY011NV

650--Mizpah-Zerk-Wintermute association

Composition

Major Components

Mizpah sandy loam, 2 to 4 percent slopes--35 percent
 Zerk gravelly sandy loam, 2 to 4 percent slopes--30
 percent
 Wintermute gravelly silt loam, 2 to 4 percent slopes--30
 percent

Contrasting Inclusions

Inclusion 1: Izar gravelly loam, 2 to 8 percent slopes--5
 percent

Map Unit Setting

Landscape position: Fan piedmonts

Mizpah--Landform: Pediments
 Zerk--Landform: Fan remnants
 Wintermute--Landform: Fan remnants
 Inclusion 1--Landform: Pediments

Major Component Description

Mizpah Series

Elevation: 6,000 to 6,200 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 55 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed
 rocks

Zerk Series

Elevation: 6,000 to 6,200 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed
 rocks

Wintermute Series

Elevation: 6,000 to 6,200 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed
 rocks

Dominant Present Vegetation

Mizpah: Indian ricegrass, needleandthread, pigmy
 sagebrush
 Zerk: Indian ricegrass, winterfat
 Wintermute: Indian ricegrass, bud sagebrush,
 shadscale, winterfat
 Inclusion 1: Indian ricegrass, black sagebrush,
 needleandthread

Ecological Site

Mizpah: 028BY040NV
 Zerk: 028BY084NV
 Wintermute: 028BY075NV
 Inclusion 1: 028BY011NV

671--Idway-Mysol association***Composition*****Major Components**

Idway sandy loam, 0 to 2 percent slopes--60 percent

Mysol silt loam, 0 to 2 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Sheffit silty clay loam, 0 to 2 percent slopes--8 percent

Inclusion 2: Typic Torriorthents, coarse-loamy, mixed (calcareous), mesic silt loam, 0 to 2 percent slopes--7 percent

Map Unit Setting

Landscape position: Intermontane basins

Idway--Landform: Lake plains

Mysol--Landform: Lake plains

Inclusion 1--Landform: Lake plains

Inclusion 2--Landform: Lake plains

Major Component Description**Idway Series**

Elevation: 5,600 to 5,700 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 25 percent gravel

Surface layer texture: Sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Mysol Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 7 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Lacustrine sediments derived from mixed rocks

Dominant Present Vegetation

Idway: Basin wildrye, big sagebrush, black greasewood

Mysol: Bottlebrush squirreltail, shadscale

Inclusion 1: Basin wildrye, big sagebrush, black greasewood

Inclusion 2: Indian ricegrass, bottlebrush squirreltail, shadscale

Ecological Site

Idway: 028BY028NV

Mysol: 028BY073NV

Inclusion 1: 028BY028NV

Inclusion 2: 028BY009NV

672--Idway-James Canyon, drained association***Composition*****Major Components**

Idway sandy loam, 0 to 2 percent slopes--65 percent

James Canyon loam, 0 to 2 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: James Canyon loam, 0 to 2 percent slopes--5 percent

Inclusion 2: Wendane silt loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins

Idway--Landform: Alluvial flats

James Canyon--Landform: Flood plains

Inclusion 1--Landform: Flood plains

Inclusion 2--Landform: Stream terraces

Major Component Description**Idway Series**

Elevation: 5,900 to 6,000 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 25 percent gravel

Surface layer texture: Sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

James Canyon Series

Elevation: 5,900 to 6,000 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Loam

Drainage class: Poorly drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Idway: Basin wildrye, big sagebrush, black greasewood

James Canyon: Alkali sacaton, basin big sagebrush,

basin wildrye, mat muhly, rubber rabbitbrush

Inclusion 1: Alkali sacaton, bluegrass, mat muhly

Inclusion 2: Black greasewood, rubber rabbitbrush

Ecological Site

Idway: 028BY028NV

James Canyon: 028BY031NV

Inclusion 1: 028BY100NV

Inclusion 2: 028BY004NV

Surface rock fragments: 2 percent stones and boulders; 15 percent cobbles; 15 percent gravel

Surface layer texture: Stony loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks

680--Simon-Graley-Chen association***Composition*****Major Components**

Simon loam, 15 to 30 percent slopes--45 percent

Graley stony loam, 8 to 30 percent slopes--30 percent

Chen very gravelly loam, 8 to 30 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Lithic Argixerolls, loamy-skeletal, mixed, frigid extremely gravelly loam, 8 to 30 percent slopes--5 percent

Inclusion 2: Lithic Argixerolls, loamy-skeletal, mixed, frigid extremely gravelly loam, 8 to 30 percent slopes--5 percent

Map Unit Setting

Landscape position: Mountains

Simon--Landform: Mountains; geomorphic position: backslope; position on slope: upper; shape of slope: concave

Graley--Landform: Mountains; geomorphic position: backslope

Chen--Landform: Mountains; geomorphic position: backslope

Inclusion 1--Landform: Mountains; geomorphic position: summit

Inclusion 2--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Major Component Description**Simon Series**

Elevation: 6,500 to 7,400 feet

Precipitation: About 11 inches

Air temperature: About 49 degrees

Frost-free season: About 95 days

Surface layer texture: Loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Graley Series

Elevation: 6,500 to 7,400 feet

Precipitation: About 12 inches

Air temperature: About 42 degrees

Frost-free season: About 85 days

Chen Series

Elevation: 6,500 to 7,400 feet

Precipitation: About 12 inches

Air temperature: About 43 degrees

Frost-free season: About 85 days

Surface rock fragments: 15 percent cobbles; 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Simon: Idaho fescue, basin big sagebrush

Graley: Mountain big sagebrush

Chen: Thurber needlegrass, bluebunch wheatgrass, low sagebrush

Inclusion 1: Mountain big sagebrush

Inclusion 2: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Ecological Site

Simon: 025XY027NV

Graley: 025XY012NV

Chen: 028BY037NV

Inclusion 1: 028BY087NV

Inclusion 2: 028BY046NV

691--Tarnach-Wesfil association***Composition*****Major Components**

Tarnach very gravelly loam, 30 to 50 percent slopes--40 percent

Tarnach very gravelly loam, 8 to 30 percent slopes--30 percent

Wesfil very channery loam, 15 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Xerollic Haplargids, loamy-skeletal, mixed, mesic extremely cobbly loam, 30 to 50 percent slopes--7 percent

Inclusion 2: Okan gravelly sandy loam, 2 to 8 percent slopes--5 percent

Inclusion 3: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic gravelly sandy loam, 8 to 30 percent slopes--2 percent

Inclusion 4: Lithic Torriorthents gravelly loam, 8 to 30 percent slopes--1 percent

Map Unit Setting

Landscape position: Hills

Tarnach--Landform: Hills; geomorphic position: backslope; shape of slope: plane

Tarnach--Landform: Hills; geomorphic position: backslope; shape of slope: plane

Wesfil--Landform: Hills; geomorphic position: summit; shape of slope: convex

Inclusion 1--Landform: Hills; geomorphic position: backslope; shape of slope: concave

Inclusion 2--Landform: Drainageways

Inclusion 3--Landform: Hills; geomorphic position: summit

Inclusion 4--Landform: Hills; geomorphic position: backslope; position on slope: lower

Major Component Description

Tarnach Series

Elevation: 5,800 to 7,200 feet

Precipitation: About 9 inches

Air temperature: About 47 degrees

Frost-free season: About 120 days

Surface rock fragments: 50 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks

Tarnach Series

Elevation: 5,800 to 7,200 feet

Precipitation: About 9 inches

Air temperature: About 47 degrees

Frost-free season: About 120 days

Surface rock fragments: 50 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks

Wesfil Series

Elevation: 5,800 to 7,200 feet

Precipitation: About 8 inches

Air temperature: About 50 degrees

Frost-free season: About 110 days

Surface rock fragments: 10 percent stones and boulders; 60 percent gravel

Surface layer texture: Very channery loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Tarnach: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Tarnach: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Wesfil: Indian ricegrass, black sagebrush, needleandthread

Inclusion 1: Indian ricegrass, big sagebrush, bluebunch wheatgrass

Inclusion 2: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Inclusion 3: Thurber needlegrass, black sagebrush, bluebunch wheatgrass

Inclusion 4: Indian ricegrass, bud sagebrush, galleta, shadscale

Ecological Site

Tarnach: 028BY008NV

Tarnach: 028BY006NV

Wesfil: 028BY016NV

Inclusion 1: 028BY094NV

Inclusion 2: 028BY052NV

Inclusion 3: 028BY093NV

Inclusion 4: 028AY003NV

692--Tarnach-Upatad-Wesfil association

Composition

Major Components

Tarnach very gravelly loam, 15 to 50 percent slopes--45 percent

Upatad very gravelly silt loam, 15 to 50 percent slopes--25 percent

Wesfil very channery loam, 15 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Xerollic Calciorthids, loamy-skeletal, mixed, mesic very gravelly loam, 15 to 50 percent slopes--8 percent

Inclusion 2: Pioche very gravelly loam, 15 to 50 percent slopes--3 percent

Inclusion 3: Shabliiss very gravelly loam, 2 to 8 percent slopes--2 percent

Inclusion 4: Eastwell very gravelly loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains

Tarnach--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: south

Upatad--Landform: Mountains; geomorphic position: backslope; aspect: north

Wesfil--Landform: Mountains; geomorphic position: backslope; position on slope: lower; shape of slope: convex

Inclusion 1--Landform: Mountains; geomorphic position: backslope

Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: north

Inclusion 3--Landform: Fan remnants

Inclusion 4--Landform: Fan remnants

Major Component Description**Tarnach Series**

Elevation: 6,800 to 7,400 feet

Precipitation: About 9 inches

Air temperature: About 47 degrees

Frost-free season: About 120 days

Surface rock fragments: 50 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks

Upatad Series

Elevation: 6,800 to 7,400 feet

Precipitation: About 12 inches

Air temperature: About 47 degrees

Frost-free season: About 100 days

Surface rock fragments: 80 percent gravel

Surface layer texture: Very gravelly silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks

Wesfil Series

Elevation: 6,200 to 6,800 feet

Precipitation: About 8 inches

Air temperature: About 50 degrees

Frost-free season: About 110 days

Surface rock fragments: 10 percent stones and boulders; 60 percent gravel

Surface layer texture: Very channery loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Tarnach: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Upatad: Thurber needlegrass, black sagebrush, bluebunch wheatgrass

Wesfil: Indian ricegrass, black sagebrush, needleandthread

Inclusion 1: Thurber needlegrass, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Inclusion 2: Utah juniper, singleleaf pinyon

Inclusion 3: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 4: Indian ricegrass, black sagebrush, needleandthread

Ecological Site

Tarnach: 028BY008NV

Upatad: 028BY093NV

Wesfil: 028BY016NV

Inclusion 1: 028BY087NV

Inclusion 2: 028BY062NV

Inclusion 3: 028BY010NV

Inclusion 4: 028BY011NV

700--Shabliss-Tulase-Linoyer association**Composition****Major Components**

Shabliss gravelly fine sandy loam, 2 to 8 percent slopes--35 percent

Tulase very fine sandy loam, 2 to 8 percent slopes--30 percent

Linoyer silt loam, 2 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Okan gravelly sandy loam, 4 to 8 percent slopes--5 percent

Inclusion 2: Entic Durorthids, loamy, mixed, mesic, shallow silt loam, 2 to 4 percent slopes--5 percent

Inclusion 3: Durorthidic Torriorthents, coarse-loamy, mixed (calcareous), mesic silt loam, 2 to 8 percent slopes--3 percent

Inclusion 4: Palinor very gravelly sandy loam, 4 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Shabliss--Landform: Fan remnants
 Tulase--Landform: Inset fans
 Linoyer--Landform: Inset fans
 Inclusion 1--Landform: Inset fans
 Inclusion 2--Landform: Fan remnants
 Inclusion 3--Landform: Fan skirts
 Inclusion 4--Landform: Fan remnants

Major Component Description

Shabliss Series

Elevation: 5,700 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Tulase Series

Elevation: 5,700 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Very fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Linoyer Series

Elevation: 5,700 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Shabliss: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Tulase: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat
 Linoyer: Indian ricegrass, winterfat
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, spiny hopsage
 Inclusion 2: Indian ricegrass, winterfat
 Inclusion 3: Indian ricegrass, bud sagebrush, shadscale
 Inclusion 4: Indian ricegrass, black sagebrush, needleandthread

Ecological Site

Shabliss: 028BY010NV
 Tulase: 028BY045NV
 Linoyer: 028BY013NV
 Inclusion 1: 028BY052NV
 Inclusion 2: 028BY084NV
 Inclusion 3: 028BY017NV
 Inclusion 4: 028BY011NV

720--Mysol association

Composition

Major Components

Mysol silty clay loam, 0 to 2 percent slopes--50 percent
 Mysol silty clay loam, 0 to 2 percent slopes, ponded--35 percent

Contrasting Inclusions

Inclusion 1: Mysol fine sand, 0 to 2 percent slopes--9 percent
 Inclusion 2: Idway loamy sand, 0 to 2 percent slopes--6 percent

Map Unit Setting

Landscape position: Intermontane basins
 Mysol--Landform: Alluvial flats
 Mysol--Landform: Alluvial flats
 Inclusion 1--Landform: Alluvial flats
 Inclusion 2--Landform: Alluvial flats

Major Component Description

Mysol Series

Elevation: 5,600 to 6,100 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay loam
 Drainage class: Well drained
 Dominant parent material: Lacustrine sediments derived from mixed rocks

Mysol Series

Elevation: 5,600 to 6,100 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay loam
 Drainage class: Well drained
 Dominant parent material: Lacustrine sediments derived from mixed rocks

Dominant Present Vegetation

Mysol: Black greasewood, bottlebrush squirreltail, shadscale

Mysol: Bottlebrush squirreltail, shadscale
 Inclusion 1: Black greasewood, bottlebrush squirreltail, shadscale
 Inclusion 2: Basin wildrye, big sagebrush, black greasewood

Ecological Site

Mysol: 028BY074NV
 Mysol: 028BY073NV
 Inclusion 1: 028BY074NV
 Inclusion 2: 028BY028NV

730--Idway-Kawich-Mysol association

Composition

Major Components

Idway loamy sand, 0 to 2 percent slopes--50 percent
 Kawich fine sand, 8 to 30 percent slopes--20 percent
 Mysol silt loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Mysol silty clay loam, 0 to 2 percent slopes--8 percent
 Inclusion 2: Typic Halaquepts, coarse-loamy, mixed (calcareous), mesic sandy loam, 0 to 2 percent slopes--7 percent

Map Unit Setting

Landscape position: Intermontane basins
 Idway--Landform: Alluvial flats
 Kawich--Landform: Dunes
 Mysol--Landform: Lake plains
 Inclusion 1--Landform: Lake plains
 Inclusion 2--Landform: Lake plains

Major Component Description

Idway Series

Elevation: 5,600 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 25 percent gravel
 Surface layer texture: Loamy sand
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Kawich Series

Elevation: 5,600 to 6,100 feet
 Precipitation: About 6 inches
 Air temperature: About 53 degrees
 Frost-free season: About 130 days
 Surface layer texture: Fine sand
 Drainage class: Excessively drained

Dominant parent material: Eolian sand

Mysol Series

Elevation: 5,600 to 6,100 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Lacustrine sediments derived from mixed rocks

Dominant Present Vegetation

Idway: Basin wildrye, big sagebrush, black greasewood
 Kawich: Indian ricegrass, black greasewood, shadscale, thickspike wheatgrass
 Mysol: Black greasewood, bottlebrush squirreltail, shadscale
 Inclusion 1: Bottlebrush squirreltail, shadscale
 Inclusion 2: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Ecological Site

Idway: 028BY028NV
 Kawich: 028BY021NV
 Mysol: 028BY074NV
 Inclusion 1: 028BY073NV
 Inclusion 2: 028BY004NV

733--Idway-Idway, moist-Mysol association

Composition

Major Components

Idway loamy sand, 0 to 2 percent slopes--35 percent
 Idway sandy loam, 0 to 4 percent slopes--25 percent
 Mysol silty clay loam, 0 to 2 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Mysol silty clay loam, 0 to 2 percent slopes--9 percent
 Inclusion 2: Typic Torriorthents, fine-silty, mixed (calcareous), mesic silty clay loam, 0 to 2 percent slopes--4 percent
 Inclusion 3: Typic Torriorthents, fine, montmorillonitic (calcareous), mesic silty clay loam, 0 to 2 percent slopes--1 percent
 Inclusion 4: Playas, 0 to 1 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
 Idway--Landform: Alluvial flats
 Idway--Landform: Alluvial flats
 Mysol--Landform: Lake plains
 Inclusion 1--Landform: Lake plains

Inclusion 2--Landform: Lake plains
 Inclusion 3--Landform: Lake plains
 Inclusion 4--Landform: Lake plains

Major Component Description

Idway Series

Elevation: 5,600 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 25 percent gravel
 Surface layer texture: Loamy sand
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Idway Series

Elevation: 5,600 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 25 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Mysol Series

Elevation: 5,600 to 6,200 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay loam
 Drainage class: Well drained
 Dominant parent material: Lacustrine sediments derived from mixed rocks

Dominant Present Vegetation

Idway: Basin big sagebrush, basin wildrye, black greasewood
 Idway: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Mysol: Black greasewood, bottlebrush squirreltail, shadscale
 Inclusion 1: Indian ricegrass, bottlebrush squirreltail, shadscale
 Inclusion 2: Alkali sacaton, black greasewood, inland saltgrass
 Inclusion 3: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail
 Inclusion 4: None

Ecological Site

Idway: 028BY028NV
 Idway: 028BY010NV
 Mysol: 028BY074NV
 Inclusion 1: 028BY009NV
 Inclusion 2: 028BY020NV
 Inclusion 3: 028BY056NV
 Inclusion 4: None

740--Upatad-Pioche-Tarnach association

Composition

Major Components

Upatad extremely cobbly loam, 15 to 50 percent slopes--45 percent
 Pioche extremely stony loam, 15 to 50 percent slopes--30 percent
 Tarnach very gravelly loam, 15 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Lithic Argixerolls, loamy-skeletal, mixed, mesic very gravelly loam, 15 to 50 percent slopes--5 percent
 Inclusion 2: Xerollic Calciorthids, loamy-skeletal, mixed, mesic very gravelly loam, 15 to 50 percent slopes--4 percent
 Inclusion 3: Rubble land, 15 to 50 percent slopes--1 percent

Map Unit Setting

Landscape position: Mountains

Upatad--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: south
 Pioche--Landform: Mountains; geomorphic position: backslope; aspect: south
 Tarnach--Landform: Mountains; geomorphic position: backslope; position on slope: lower; aspect: south
 Inclusion 1--Landform: Mountains; geomorphic position: backslope; aspect: south
 Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: lower; aspect: south
 Inclusion 3--Landform: Mountains; geomorphic position: backslope

Major Component Description

Upatad Series

Elevation: 7,000 to 7,500 feet
 Precipitation: About 12 inches
 Air temperature: About 47 degrees

Frost-free season: About 100 days
 Surface rock fragments: 20 percent cobbles; 60 percent gravel
 Surface layer texture: Extremely cobbly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from volcanic rocks

Pioche Series

Elevation: 6,400 to 7,500 feet
 Precipitation: About 12 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 10 percent cobbles; 40 percent gravel
 Surface layer texture: Extremely stony loam
 Drainage class: Well drained
 Dominant parent material: Residuum derived from volcanic rocks

Tarnach Series

Elevation: 6,400 to 7,000 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 50 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Upatad: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon
 Pioche: Utah juniper, bluebunch wheatgrass, mountain big sagebrush, singleleaf pinyon
 Tarnach: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Inclusion 1: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Inclusion 2: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 3: None

Ecological Site

Upatad: 028BY060NV
 Pioche: 028BY062NV
 Tarnach: 028BY008NV
 Inclusion 1: 028BY006NV
 Inclusion 2: 028BY016NV
 Inclusion 3: None

760--Playas, 0 to 1 percent slopes

Composition

Major Components

Playas silty clay loam, 0 to 1 percent slopes--99 percent

Contrasting Inclusions

Inclusion 1: Benin silty clay loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
 Playas--Landform: Basin floors
 Inclusion 1--Landform: Lake plains

Major Component Description

Playas Miscellaneous Area

Elevation: 4,200 to 6,100 feet
 Surface layer texture: Silty clay loam
 Drainage class: Very poorly drained
 Dominant parent material: Lacustrine sediments derived from mixed rocks

Dominant Present Vegetation

Playas: None
 Inclusion 1: Alkali sacaton, black greasewood, inland saltgrass

Ecological Site

Playas: None
 Inclusion 1: 028BY020NV

761--Umblerland association

Composition

Major Components

Umblerland silty clay, 0 to 1 percent slopes--65 percent
 Umblerland silty clay, 0 to 2 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Playas, 0 to 1 percent slopes--5 percent
 Inclusion 2: Umblerland clay, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
 Umblerland--Landform: Lake plains
 Umblerland--Landform: Lake plains
 Inclusion 1--Landform: Lake plains
 Inclusion 2--Landform: Lake plains

Major Component Description

Umblerland Series

Elevation: 6,000 to 6,100 feet

Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Somewhat poorly drained
 Dominant parent material: Lacustrine sediments derived from volcanic rocks

Umbreland Series

Elevation: 6,000 to 6,100 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Somewhat poorly drained
 Dominant parent material: Lacustrine sediments derived from volcanic rocks

Dominant Present Vegetation

Umbreland: Bluegrass, foxtail barley, inland saltgrass, rush, sedge
 Umbreland: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Inclusion 1: None
 Inclusion 2: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Ecological Site

Umbreland: 028BY098NV
 Umbreland: 028BY004NV
 Inclusion 1: None
 Inclusion 2: 028BY004NV

762--Umbreland-Playas association

Composition

Major Components

Umbreland silty clay, 0 to 1 percent slopes--50 percent
 Playas silty clay loam, 0 to 1 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Umbreland clay, 0 to 2 percent slopes--5 percent
 Inclusion 2: Benin clay, 0 to 2 percent slopes--5 percent
 Inclusion 3: Umbreland silty clay, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins

Umbreland--Landform: Lake plains
 Playas--Landform: Lake plains
 Inclusion 1--Landform: Lake plains
 Inclusion 2--Landform: Lake plains
 Inclusion 3--Landform: Lake plains

Major Component Description

Umbreland Series

Elevation: 5,900 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Somewhat poorly drained
 Dominant parent material: Lacustrine sediments derived from volcanic rocks

Playas Miscellaneous Area

Elevation: 5,900 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay loam
 Drainage class: Very poorly drained

Dominant Present Vegetation

Umbreland: Bluegrass, foxtail barley, inland saltgrass, rush, sedge
 Playas: None
 Inclusion 1: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Inclusion 2: Black greasewood, bottlebrush squirreltail, shadscale
 Inclusion 3: Inland saltgrass, western wheatgrass

Ecological Site

Umbreland: 028BY098NV
 Playas: None
 Inclusion 1: 028BY004NV
 Inclusion 2: 028BY074NV
 Inclusion 3: 028BY023NV

763--Equis-Umbreland-Duffer association

Composition

Major Components

Equis silty clay, 0 to 2 percent slopes--40 percent
 Umbreland silty clay, 0 to 2 percent slopes--30 percent
 Duffer silty clay loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

- Inclusion 1: Aquic Calciorthids, fine-loamy, mixed, mesic loam, 2 to 4 percent slopes--4 percent
 Inclusion 2: Aquic Durorthids, fine, montmorillonitic, mesic silty clay, 0 to 1 percent slopes--4 percent
 Inclusion 3: Sheffit silty clay loam, 0 to 2 percent slopes--4 percent
 Inclusion 4: Aquic Durorthids, fine-loamy, mixed, mesic silty clay loam, 0 to 2 percent slopes--3 percent

Map Unit Setting

Landscape position: Intermontane basins

Equis--Landform: Alluvial flats

Umlerland--Landform: Lake plains

Duffer--Landform: Lake plains

Inclusion 1--Landform: Fan skirts

Inclusion 2--Landform: Lake plains

Inclusion 3--Landform: Lake plains

Inclusion 4--Landform: Lake plains

Major Component Description**Equis Series**

Elevation: 5,600 to 5,700 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Umlerland Series

Elevation: 5,600 to 5,700 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Somewhat poorly drained
 Dominant parent material: Lacustrine sediments derived from volcanic rocks

Duffer Series

Elevation: 5,600 to 5,700 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay loam
 Drainage class: Poorly drained

Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Dominant Present Vegetation

Equis: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Umlerland: Alkali sacaton, black greasewood, inland saltgrass
 Duffer: Alkali cordgrass, alkali sacaton, inland saltgrass
 Inclusion 1: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Inclusion 2: Basin wildrye, black greasewood, inland saltgrass
 Inclusion 3: Basin big sagebrush, basin wildrye, rubber rabbitbrush, western wheatgrass
 Inclusion 4: Alkali sacaton, bluegrass, mat muhly

Ecological Site

Equis: 028BY004NV
 Umlerland: 028BY020NV
 Duffer: 028BY002NV
 Inclusion 1: 028BY004NV
 Inclusion 2: 028BY069NV
 Inclusion 3: 028BY041NV
 Inclusion 4: 028BY100NV

764--Umlerland-Rubylake-Orupa association**Composition****Major Components**

Umlerland silty clay loam, 0 to 2 percent slopes--45 percent
 Rubylake clay loam, 0 to 4 percent slopes--30 percent
 Orupa silty clay loam, 2 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Playas, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
 Umlerland--Landform: Lake plains
 Rubylake--Landform: Lake terraces
 Orupa--Landform: Parna dunes
 Inclusion 1--Landform: Lake plains

Major Component Description**Umlerland Series**

Elevation: 5,900 to 6,000 feet
 Precipitation: About 7 inches

Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay loam
 Drainage class: Somewhat poorly drained
 Dominant parent material: Lacustrine sediments derived from volcanic rocks

Rubylake Series

Elevation: 5,900 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Clay loam
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Orupa Series

Elevation: 5,900 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay loam
 Drainage class: Well drained
 Dominant parent material: Eolian material

Dominant Present Vegetation

Umberland: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Rubylake: Inland saltgrass, sedge, western wheatgrass
 Orupa: Alkali sacaton, black greasewood, inland saltgrass
 Inclusion 1: None

Ecological Site

Umberland: 028BY004NV
 Rubylake: 028BY012NV
 Orupa: 028BY020NV
 Inclusion 1: None

765--Umberland-Wendane association

Composition

Major Components

Umberland silty clay, ponded, 0 to 2 percent slopes--35 percent
 Umberland silty clay, 0 to 2 percent slopes--30 percent
 Wendane silt loam, 0 to 4 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Rubylake silt loam, 0 to 4 percent slopes--5 percent
 Inclusion 2: Umberland silty clay, 0 to 2 percent slopes--5 percent

Inclusion 3: Playas silty clay, 0 to 1 percent slopes--4 percent
 Inclusion 4: Orupa silty clay, 4 to 15 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
 Umberland--Landform: Lake plains
 Umberland--Landform: Lake plains
 Wendane--Landform: Lake terraces
 Inclusion 1--Landform: Lake terraces
 Inclusion 2--Landform: Lake plains
 Inclusion 3--Landform: Lake plains
 Inclusion 4--Landform: Parna dunes

Major Component Description

Umberland Series

Elevation: 6,000 to 6,100 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Somewhat poorly drained
 Dominant parent material: Lacustrine sediments derived from volcanic rocks

Umberland Series

Elevation: 6,000 to 6,100 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Somewhat poorly drained
 Dominant parent material: Lacustrine sediments derived from volcanic rocks

Wendane Series

Elevation: 6,000 to 6,100 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Somewhat poorly drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Umberland: Bluegrass, inland saltgrass, sedge
 Umberland: Alkali sacaton, black greasewood, inland saltgrass
 Wendane: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Inclusion 1: Alkali cordgrass, alkali sacaton, inland saltgrass
 Inclusion 2: Inland saltgrass, western wheatgrass
 Inclusion 3: None
 Inclusion 4: Alkali sacaton, black greasewood, inland saltgrass

Ecological Site

Umbreland: 028BY098NV
 Umbreland: 028BY020NV
 Wendane: 028BY004NV
 Inclusion 1: 028BY002NV
 Inclusion 2: 028BY023NV
 Inclusion 3: None
 Inclusion 4: 028BY020NV

767--Umbreland-Orupa association

Composition

Major Components

Umbreland silty clay, 0 to 2 percent slopes--45 percent
 Umbreland silty clay, 0 to 2 percent slopes, ponded--30 percent
 Orupa silty clay, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Umbreland silty clay, 0 to 2 percent slopes--5 percent
 Inclusion 2: Playas silty clay, 0 to 1 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
 Umbreland--Landform: Lake terraces
 Umbreland--Landform: Lake plains
 Orupa--Landform: Parna dunes
 Inclusion 1--Landform: Lake plains
 Inclusion 2--Landform: Lake plains

Major Component Description

Umbreland Series

Elevation: 6,000 to 6,100 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Somewhat poorly drained
 Dominant parent material: Lacustrine sediments derived from volcanic rocks

Umbreland Series

Elevation: 6,000 to 6,100 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees

Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Somewhat poorly drained
 Dominant parent material: Lacustrine sediments derived from volcanic rocks

Orupa Series

Elevation: 6,000 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Well drained
 Dominant parent material: Eolian material

Dominant Present Vegetation

Umbreland: Alkali sacaton, black greasewood, inland saltgrass
 Umbreland: Bluegrass, foxtail barley, inland saltgrass, rush, sedge
 Orupa: Alkali sacaton, black greasewood, inland saltgrass
 Inclusion 1: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Inclusion 2: None

Ecological Site

Umbreland: 028BY020NV
 Umbreland: 028BY098NV
 Orupa: 028BY020NV
 Inclusion 1: 028BY004NV
 Inclusion 2: None

781--Mysol-Benin-Wendane association

Composition

Major Components

Mysol silty clay loam, 0 to 2 percent slopes--35 percent
 Benin silt loam, 0 to 2 percent slopes--25 percent
 Wendane silty clay loam, 0 to 2 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Typic Torriorthents, fine-loamy over sandy or sandy-skeletal, mixed (calcareous), mesic silt loam, 0 to 2 percent slopes--8 percent
 Inclusion 2: Playas, 0 to 1 percent slopes--3 percent
 Inclusion 3: Toano silt loam, 0 to 2 percent slopes--2 percent
 Inclusion 4: Katelana silt loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins

Mysol--Landform: Lake plains
 Benin--Landform: Lake plains
 Wendane--Landform: Drainageways
 Inclusion 1--Landform: Lake plains
 Inclusion 2--Landform: Lake plains
 Inclusion 3--Landform: Lake plains
 Inclusion 4--Landform: Lake plains

Major Component Description

Mysol Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay loam
 Drainage class: Well drained
 Dominant parent material: Lacustrine sediments derived from mixed rocks

Benin Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Wendane Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay loam
 Drainage class: Somewhat poorly drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Mysol: Black greasewood, bottlebrush squirreltail, shadscale
 Benin: Alkali sacaton, black greasewood, inland saltgrass
 Wendane: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Inclusion 1: Basin wildrye, big sagebrush, black greasewood
 Inclusion 2: None
 Inclusion 3: Indian ricegrass, sickle saltbush, western wheatgrass
 Inclusion 4: Bottlebrush squirreltail, shadscale

Ecological Site

Mysol: 028BY074NV

Benin: 028BY020NV
 Wendane: 028BY004NV
 Inclusion 1: 028BY028NV
 Inclusion 2: None
 Inclusion 3: 028BY047NV
 Inclusion 4: 028BY073NV

800--Mazuma-Toano association

Composition

Major Components

Mazuma silt loam, 0 to 2 percent slopes--55 percent
 Toano silt loam, 0 to 4 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Katelana silt loam, 0 to 2 percent slopes--5 percent
 Inclusion 2: Linoyer silt loam, 0 to 2 percent slopes--3 percent
 Inclusion 3: Tulase silt loam, 0 to 2 percent slopes--1 percent
 Inclusion 4: Zerk gravelly loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Mazuma--Landform: Fan skirts
 Toano--Landform: Fan skirts; position on slope: upper
 Inclusion 1--Landform: Lake plains
 Inclusion 2--Landform: Fan skirts
 Inclusion 3--Landform: Fan skirts
 Inclusion 4--Landform: Fan skirts

Major Component Description

Mazuma Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 6 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Toano Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 115 days
 Surface layer texture: Silt loam
 Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Mazuma: Bottlebrush squirreltail, shadscale

Toano: Indian ricegrass, sickle saltbush, western wheatgrass

Inclusion 1: Bottlebrush squirreltail, shadscale

Inclusion 2: Indian ricegrass, winterfat

Inclusion 3: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat

Inclusion 4: Indian ricegrass, bud sagebrush, shadscale, winterfat

Ecological Site

Mazuma: 028BY073NV

Toano: 028BY047NV

Inclusion 1: 028BY073NV

Inclusion 2: 028BY013NV

Inclusion 3: 028BY045NV

Inclusion 4: 028BY075NV

801--Mazuma-Zerk-Okan association

Composition

Major Components

Mazuma silt loam, 2 to 4 percent slopes--45 percent

Zerk gravelly loam, 0 to 2 percent slopes--25 percent

Okan sandy loam, 2 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Ragtown silty clay loam, 0 to 2 percent slopes--8 percent

Inclusion 2: Piltdown loamy fine sand, 0 to 4 percent slopes--7 percent

Map Unit Setting

Landscape position: Intermontane basins

Mazuma--Landform: Fan skirts

Zerk--Landform: Barrier beaches

Okan--Landform: Fan skirts

Inclusion 1--Landform: Lake plains

Inclusion 2--Landform: Barrier beaches

Major Component Description

Mazuma Series

Elevation: 5,700 to 5,800 feet

Precipitation: About 6 inches

Air temperature: About 50 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Zerk Series

Elevation: 5,700 to 5,800 feet

Precipitation: About 7 inches

Air temperature: About 47 degrees

Frost-free season: About 120 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Okan Series

Elevation: 5,700 to 5,800 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Mazuma: Bottlebrush squirreltail, shadscale

Zerk: Indian ricegrass, bud sagebrush, shadscale, winterfat

Okan: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Inclusion 1: Indian ricegrass, sickle saltbush, western wheatgrass

Inclusion 2: Black greasewood, bottlebrush squirreltail, sickle saltbush

Ecological Site

Mazuma: 028BY073NV

Zerk: 028BY075NV

Okan: 028BY052NV

Inclusion 1: 028BY047NV

Inclusion 2: 028BY097NV

804--Mazuma-Kawich-Playas association

Composition

Major Components

Mazuma silt loam, 0 to 4 percent slopes--35 percent

Kawich fine sand, 4 to 30 percent slopes--30 percent

Playas silty clay loam, 0 to 1 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Aquic Torriorthents, coarse-loamy,

mixed (calcareous), mesic silt loam, 0 to 2 percent slopes--9 percent
 Inclusion 2: Aeric Halaquepts, coarse-loamy, mixed (calcareous), mesic silty clay loam, 0 to 2 percent slopes--2 percent
 Inclusion 3: Typic Torriorthents, fine-loamy over sandy or sandy-skeletal, mixed (calcareous), mesic silt loam, 0 to 2 percent slopes--2 percent
 Inclusion 4: Benin silty clay loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
 Mazuma--Landform: Lake plains
 Kawich--Landform: Dunes
 Playas--Landform: Lake plains
 Inclusion 1--Landform: Lake plains
 Inclusion 2--Landform: Lake plains
 Inclusion 3--Landform: Lake plains
 Inclusion 4--Landform: Lake plains

Major Component Description

Mazuma Series

Elevation: 5,600 to 5,700 feet
 Precipitation: About 6 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Kawich Series

Elevation: 5,600 to 5,700 feet
 Precipitation: About 6 inches
 Air temperature: About 53 degrees
 Frost-free season: About 130 days
 Surface layer texture: Fine sand
 Drainage class: Excessively drained
 Dominant parent material: Eolian sand

Playas Miscellaneous Area

Elevation: 5,600 to 5,700 feet
 Surface layer texture: Silty clay loam
 Drainage class: Very poorly drained

Dominant Present Vegetation

Mazuma: Black greasewood, bottlebrush squirreltail, shadscale
 Kawich: Indian ricegrass, black greasewood, shadscale, thickspike wheatgrass

Playas: None

Inclusion 1: Inland saltgrass

Inclusion 2: Inland saltgrass, iodinebush

Inclusion 3: Basin wildrye, black greasewood, inland saltgrass

Inclusion 4: Alkali sacaton, black greasewood, inland saltgrass

Ecological Site

Mazuma: 028BY074NV

Kawich: 028BY021NV

Playas: None

Inclusion 1: 028BY050NV

Inclusion 2: 028AY009NV

Inclusion 3: 028BY069NV

Inclusion 4: 028BY020NV

807--Mazuma-Kunzler-Zerk association

Composition

Major Components

Mazuma silt loam, 0 to 2 percent slopes--40 percent
 Kunzler loam, 0 to 2 percent slopes--30 percent
 Zerk gravelly sandy loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Threesee very gravelly sandy loam, 2 to 4 percent slopes--5 percent
 Inclusion 2: Typic Torriorthents, coarse-loamy, mixed (calcareous), mesic gravelly loamy sand, 2 to 4 percent slopes--5 percent
 Inclusion 3: Typic Camborthids, fine-loamy, mixed, mesic gravelly silt loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
 Mazuma--Landform: Lake plains
 Kunzler--Landform: Barrier beaches
 Zerk--Landform: Barrier beaches
 Inclusion 1--Landform: Spits
 Inclusion 2--Landform: Fan skirts
 Inclusion 3--Landform: Barrier beaches

Major Component Description

Mazuma Series

Elevation: 6,100 to 6,300 feet
 Precipitation: About 6 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam

Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Kunzler Series

Elevation: 6,100 to 6,300 feet
 Precipitation: About 8 inches
 Air temperature: About 48 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from sedimentary rocks

Zerk Series

Elevation: 6,100 to 6,300 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Mazuma: Bottlebrush squirreltail, shadscale
 Kunzler: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail
 Zerk: Indian ricegrass, bud sagebrush, shadscale, winterfat
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 2: Indian ricegrass, fourwing saltbush, spiny hopsage
 Inclusion 3: Indian ricegrass, winterfat

Ecological Site

Mazuma: 028BY073NV
 Kunzler: 028BY056NV
 Zerk: 028BY075NV
 Inclusion 1: 028BY010NV
 Inclusion 2: 028BY078NV
 Inclusion 3: 028BY084NV

823--Kunzler-Pyrat-Blimo association

Composition

Major Components

Kunzler loam, 2 to 4 percent slopes--40 percent
 Pyrat gravelly sandy loam, 2 to 4 percent slopes--25 percent
 Blimo gravelly loam, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Loray very gravelly sandy loam, 2 to 4 percent slopes--8 percent
 Inclusion 2: Sycomat silt loam, 0 to 4 percent slopes--7 percent

Map Unit Setting

Landscape position: Intermontane basins
 Kunzler--Landform: Barrier beaches
 Pyrat--Landform: Spits
 Blimo--Landform: Barrier beaches
 Inclusion 1--Landform: Barrier beaches
 Inclusion 2--Landform: Barrier beaches

Major Component Description

Kunzler Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 48 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from sedimentary rocks

Pyrat Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Blimo Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Kunzler: Basin wildrye, big sagebrush, black greasewood
 Pyrat: Indian ricegrass, Wyoming big sagebrush, needleandthread

Blimo: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 1: Indian ricegrass, bud sagebrush, shadscale

Inclusion 2: Black greasewood, bottlebrush squirreltail, shadscale

Ecological Site

Kunzler: 028BY028NV

Pyrat: 028BY010NV

Blimo: 028BY010NV

Inclusion 1: 028BY017NV

Inclusion 2: 028BY074NV

824--Kunzler-Katelana association

Composition

Major Components

Kunzler loam, 0 to 2 percent slopes--70 percent

Katelana silt loam, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Duffer silt loam, 0 to 2 percent slopes--5 percent

Inclusion 2: Sycomat silt loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins

Kunzler--Landform: Fan skirts

Katelana--Landform: Lake plains

Inclusion 1--Landform: Fan skirts

Inclusion 2--Landform: Fan skirts

Major Component Description

Kunzler Series

Elevation: 5,800 to 6,000 feet

Precipitation: About 8 inches

Air temperature: About 48 degrees

Frost-free season: About 120 days

Surface rock fragments: 5 percent gravel

Surface layer texture: Loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from sedimentary rocks

Katelana Series

Elevation: 5,800 to 6,000 feet

Precipitation: About 7 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

Kunzler: Basin wildrye, big sagebrush, black greasewood

Katelana: Black greasewood, bottlebrush squirreltail, shadscale

Inclusion 1: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Inclusion 2: Black greasewood, bottlebrush squirreltail, shadscale

Ecological Site

Kunzler: 028BY028NV

Katelana: 028BY074NV

Inclusion 1: 028BY004NV

Inclusion 2: 028BY074NV

827--Kunzler-James Canyon association

Composition

Major Components

Kunzler silt loam, 0 to 2 percent slopes--55 percent

James Canyon fine sandy loam, 0 to 2 percent slopes--15 percent

James Canyon loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Durixerollic Camborthids, coarse-loamy over sandy or sandy-skeletal, mixed, mesic fine sandy loam, 0 to 4 percent slopes--8 percent

Inclusion 2: Wendane silt loam, 0 to 2 percent slopes--5 percent

Inclusion 3: Benin silty clay, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins

Kunzler--Landform: Barrier beaches

James Canyon--Landform: Flood plains

James Canyon--Landform: Flood plains

Inclusion 1--Landform: Lake terraces

Inclusion 2--Landform: Lake terraces

Inclusion 3--Landform: Lake terraces

Major Component Description

Kunzler Series

Elevation: 5,600 to 6,300 feet

Precipitation: About 8 inches

Air temperature: About 48 degrees

Frost-free season: About 120 days

Surface rock fragments: 5 percent gravel

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from sedimentary rocks

James Canyon Series

Elevation: 5,600 to 6,300 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Fine sandy loam

Drainage class: Poorly drained

Dominant parent material: Alluvium derived from mixed rocks

James Canyon Series

Elevation: 5,600 to 6,300 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Loam

Drainage class: Poorly drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Kunzler: Basin wildrye, big sagebrush, black greasewood

James Canyon: Alkali sacaton, bluegrass, mat muhly

James Canyon: Alkali sacaton, basin big sagebrush, basin wildrye, mat muhly, rubber rabbitbrush

Inclusion 1: Basin wildrye, big sagebrush, black greasewood

Inclusion 2: Alkali sacaton, black greasewood, inland saltgrass

Inclusion 3: Basin wildrye, big sagebrush, black greasewood

Ecological Site

Kunzler: 028BY028NV

James Canyon: 028BY100NV

James Canyon: 028BY031NV

Inclusion 1: 028BY028NV

Inclusion 2: 028BY020NV

Inclusion 3: 028BY028NV

828--Kunzler-Pyrat-Wendane association

Composition

Major Components

Kunzler loam, 2 to 4 percent slopes--50 percent

Pyrat gravelly sandy loam, 0 to 2 percent slopes--20 percent

Wendane silt loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Cumulic Endoaquolls, fine-loamy, mixed, mesic silt loam, 2 to 8 percent slopes--2 percent

Inclusion 2: Palinor gravelly loam, 2 to 8 percent slopes--5 percent

Inclusion 3: Boofuss silty clay, 0 to 2 percent slopes--5 percent

Inclusion 4: Pyrat, 2 to 4 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts

Kunzler--Landform: Fan skirts

Pyrat--Landform: Fan skirts; position on slope: upper

Wendane--Landform: Fan skirts; position on slope: lower

Inclusion 1--Landform: Fan skirts; position on slope: upper

Inclusion 2--Landform: Fan remnants

Inclusion 3--Landform: Fan skirts; position on slope: lower

Inclusion 4--Landform: Fan skirts; position on slope: upper

Major Component Description

Kunzler Series

Elevation: 5,600 to 6,400 feet

Precipitation: About 8 inches

Air temperature: About 48 degrees

Frost-free season: About 120 days

Surface rock fragments: 5 percent gravel

Surface layer texture: Loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from sedimentary rocks

Pyrat Series

Elevation: 5,600 to 6,400 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Wendane Series

Elevation: 5,600 to 6,400 feet

Precipitation: About 7 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Somewhat poorly drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Kunzler: Basin big sagebrush, basin wildrye, black greasewood

Pyrat: Indian ricegrass, Wyoming big sagebrush, needleandthread

Wendane: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Inclusion 1: Bluegrass, rush, sedge

Inclusion 2: Indian ricegrass, black sagebrush, needleandthread

Inclusion 3: Alkali cordgrass, alkali sacaton, inland saltgrass

Inclusion 4: Indian ricegrass, Wyoming big sagebrush, needleandthread

Ecological Site

Kunzler: 028BY028NV

Pyrat: 028BY010NV

Wendane: 028BY004NV

Inclusion 1: 028BY001NV

Inclusion 2: 028BY011NV

Inclusion 3: 028BY002NV

Inclusion 4: 028BY010NV

830--Pharo-Kzin association***Composition*****Major Components**

Pharo gravelly loam, 15 to 50 percent slopes--45 percent

Kzin very gravelly loam, 15 to 50 percent slopes--25 percent

Pharo gravelly loam, 4 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Durixerollic Camborthids, coarse-loamy, mixed, mesic gravelly very fine sandy loam, 2 to 8 percent slopes--10 percent

Inclusion 2: Izar very gravelly loam, 15 to 50 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts

Pharo--Landform: Ballenas; geomorphic position: backslope; shape of slope: convex

Kzin--Landform: Pediments; geomorphic position: backslope

Pharo--Landform: Ballenas; geomorphic position: summit

Inclusion 1--Landform: Inset fans

Inclusion 2--Landform: Pediments; geomorphic position: backslope

Major Component Description**Pharo Series**

Elevation: 6,500 to 7,300 feet

Precipitation: About 12 inches

Air temperature: About 46 degrees

Frost-free season: About 100 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Somewhat excessively drained

Dominant parent material: Alluvium derived from limestone and dolomite

Kzin Series

Elevation: 5,600 to 6,500 feet

Precipitation: About 11 inches

Air temperature: About 47 degrees

Frost-free season: About 100 days

Surface rock fragments: 80 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum derived from sedimentary rocks

Pharo Series

Elevation: 6,500 to 7,300 feet

Precipitation: About 12 inches

Air temperature: About 46 degrees

Frost-free season: About 100 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Somewhat excessively drained

Dominant parent material: Alluvium derived from limestone and dolomite

Dominant Present Vegetation

Pharo: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Kzin: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Pharo: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Inclusion 1: Thurber needlegrass, big sagebrush, bluebunch wheatgrass

Inclusion 2: Indian ricegrass, black sagebrush, needleandthread

Ecological Site

Pharo: 028BY006NV

Kzin: 028BY060NV

Pharo: 028BY006NV

Inclusion 1: 028BY007NV

Inclusion 2: 028BY016NV

842--Katelana-Timpie association

Composition

Major Components

Katelana silt loam, 0 to 2 percent slopes--50 percent

Timpie silt loam, 0 to 2 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Katelana silt loam, 0 to 2 percent slopes--5 percent

Inclusion 2: Typic Torriorthents, coarse-loamy, mixed (calcareous), mesic fine sandy loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins

Katelana--Landform: Lake plains

Timpie--Landform: Alluvial flats

Inclusion 1--Landform: Lake plains

Inclusion 2--Landform: Lake plains

Major Component Description

Katelana Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 7 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Timpie Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 7 inches

Air temperature: About 40 degrees

Frost-free season: About 130 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Dominant Present Vegetation

Katelana: Bottlebrush squirreltail, shadscale

Timpie: Thickspike wheatgrass, western wheatgrass, winterfat

Inclusion 1: Black greasewood, bottlebrush squirreltail, shadscale

Inclusion 2: Indian ricegrass, bottlebrush squirreltail, shadscale

Ecological Site

Katelana: 028BY073NV

Timpie: 028BY071NV

Inclusion 1: 028BY074NV

Inclusion 2: 028BY009NV

843--Katelana-Kawich association

Composition

Major Components

Katelana silt loam, 0 to 2 percent slopes--50 percent

Kawich fine sand, 2 to 8 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Kunzler silt loam, 0 to 2 percent slopes--10 percent

Inclusion 2: Katelana silt loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins

Katelana--Landform: Lake plains

Kawich--Landform: Dunes

Inclusion 1--Landform: Lake plains

Inclusion 2--Landform: Lake plains

Major Component Description

Katelana Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 7 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Kawich Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 6 inches

Air temperature: About 53 degrees

Frost-free season: About 130 days

Surface layer texture: Fine sand

Drainage class: Excessively drained

Dominant parent material: Eolian sand

Dominant Present Vegetation

Katelana: Bottlebrush squirreltail, shadscale

Kawich: Indian ricegrass, black greasewood, shadscale, thickspike wheatgrass

Inclusion 1: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail

Inclusion 2: Black greasewood, bottlebrush squirreltail, shadscale

Ecological Site

Katelana: 028BY073NV
 Kawich: 028BY021NV
 Inclusion 1: 028BY056NV
 Inclusion 2: 028BY074NV

845--Katelana-Ragtown-Timpie association***Composition*****Major Components**

Katelana silt loam, 0 to 2 percent slopes--50 percent
 Ragtown silt loam, 0 to 2 percent slopes--20 percent
 Timpie silt loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Typic Torriorthents, fine-silty, mixed (calcareous), mesic silty clay loam, 0 to 2 percent slopes--5 percent
 Inclusion 2: Katelana silt loam, 0 to 2 percent slopes--10 percent

Map Unit Setting

Landscape position: Intermontane basins

Katelana--Landform: Lake plains

Ragtown--Landform: Lake plains

Timpie--Landform: Lake plains

Inclusion 1--Landform: Lake plains

Inclusion 2--Landform: Lake plains

Major Component Description**Katelana Series**

Elevation: 5,600 to 6,400 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Ragtown Series

Elevation: 5,600 to 6,400 feet
 Precipitation: About 6 inches
 Air temperature: About 51 degrees
 Frost-free season: About 120 days
 Surface layer texture: Silt loam
 Drainage class: Moderately well drained
 Dominant parent material: Lacustrine sediments derived from volcanic rocks

Timpie Series

Elevation: 5,600 to 6,400 feet

Precipitation: About 7 inches
 Air temperature: About 49 degrees
 Frost-free season: About 130 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Dominant Present Vegetation

Katelana: Bottlebrush squirreltail, shadscale
 Ragtown: Indian ricegrass, sickle saltbush, western wheatgrass
 Timpie: Thickspike wheatgrass, western wheatgrass, winterfat
 Inclusion 1: Indian ricegrass, bottlebrush squirreltail, shadscale
 Inclusion 2: Black greasewood, bottlebrush squirreltail, shadscale

Ecological Site

Katelana: 028BY073NV
 Ragtown: 028BY047NV
 Timpie: 028BY071NV
 Inclusion 1: 028BY009NV
 Inclusion 2: 028BY074NV

847--Mazuma-Blimo-Wintermute association***Composition*****Major Components**

Mazuma silt loam, 0 to 2 percent slopes--45 percent
 Blimo silt loam, 0 to 2 percent slopes--25 percent
 Wintermute gravelly silt loam, 0 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Toano silt loam, 0 to 2 percent slopes--7 percent
 Inclusion 2: Linoyer silt loam, 0 to 2 percent slopes--7 percent
 Inclusion 3: Loray sandy loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
 Mazuma--Landform: Lake plains
 Blimo--Landform: Fan skirts
 Wintermute--Landform: Fan remnants
 Inclusion 1--Landform: Fan skirts
 Inclusion 2--Landform: Inset fans
 Inclusion 3--Landform: Fan skirts

Major Component Description**Mazuma Series**

Elevation: 5,600 to 6,300 feet
 Precipitation: About 6 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Blimo Series

Elevation: 5,600 to 6,300 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Wintermute Series

Elevation: 5,600 to 6,300 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Mazuma: Bottlebrush squirreltail, shadscale
 Blimo: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Wintermute: Indian ricegrass, bud sagebrush, shadscale, winterfat
 Inclusion 1: Indian ricegrass, sickle saltbush, western wheatgrass
 Inclusion 2: Indian ricegrass, winterfat
 Inclusion 3: Indian ricegrass, bud sagebrush, shadscale

Ecological Site

Mazuma: 028BY073NV
 Blimo: 028BY010NV
 Wintermute: 028BY075NV
 Inclusion 1: 028BY047NV
 Inclusion 2: 028BY013NV
 Inclusion 3: 028BY017NV

850--Palinor-Wintermute-Okan association***Composition*****Major Components**

Palinor very gravelly loam, 2 to 8 percent slopes--40 percent
 Wintermute gravelly silt loam, 2 to 8 percent slopes--30 percent
 Okan sandy loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Automal gravelly loam, 8 to 30 percent slopes--10 percent
 Inclusion 2: Heist gravelly sandy loam, 2 to 8 percent slopes--2 percent
 Inclusion 3: Kzin very gravelly loam, 8 to 30 percent slopes--2 percent
 Inclusion 4: Tecomar very gravelly loam, 8 to 30 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Palinor--Landform: Fan remnants; position on slope: upper
 Wintermute--Landform: Fan remnants; position on slope: lower
 Okan--Landform: Fan skirts
 Inclusion 1--Landform: Fan remnants; geomorphic position: backslope
 Inclusion 2--Landform: Inset fans
 Inclusion 3--Landform: Pediments; geomorphic position: backslope; position on slope: upper
 Inclusion 4--Landform: Hills

Major Component Description**Palinor Series**

Elevation: 5,700 to 6,700 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Wintermute Series

Elevation: 5,700 to 6,700 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Okan Series

Elevation: 5,700 to 6,700 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Palinor: Indian ricegrass, black sagebrush, needleandthread

Wintermute: Indian ricegrass, bud sagebrush, shadscale, winterfat

Okan: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Inclusion 1: Indian ricegrass, black sagebrush, needleandthread

Inclusion 2: Indian ricegrass, winterfat

Inclusion 3: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Inclusion 4: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Ecological Site

Palinor: 028BY011NV

Wintermute: 028BY075NV

Okan: 028BY052NV

Inclusion 1: 028BY011NV

Inclusion 2: 028BY084NV

Inclusion 3: 028BY060NV

Inclusion 4: 028BY008NV

851--Palinor-Zimbob-Tecomar association

Composition

Major Components

Palinor very gravelly loam, 2 to 8 percent slopes--40 percent

Zimbob very gravelly loam, 15 to 50 percent slopes--25 percent

Tecomar extremely gravelly loam, 8 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Wintermute gravelly silt loam, 2 to 8 percent slopes--5 percent

Inclusion 2: Rock outcrop--5 percent

Inclusion 3: Okan gravelly sandy loam, 2 to 8 percent slopes--3 percent

Inclusion 4: Xeric Torriorthents sandy loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills and intermontane basins

Palinor--Landform: Fan remnants

Zimbob--Landform: Hills

Tecomar--Landform: Hills; geomorphic position: backslope

Inclusion 1--Landform: Fan remnants; position on slope: lower

Inclusion 2--Landform: Hills; geomorphic position: summit

Inclusion 3--Landform: Drainageways

Inclusion 4--Landform: Inset fans

Major Component Description

Palinor Series

Elevation: 5,700 to 6,800 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Zimbob Series

Elevation: 5,700 to 6,800 feet

Precipitation: About 12 inches

Air temperature: About 47 degrees

Frost-free season: About 100 days

Surface rock fragments: 15 percent cobbles; 80 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Tecomar Series

Elevation: 5,700 to 6,800 feet

Precipitation: About 12 inches

Air temperature: About 46 degrees

Frost-free season: About 100 days

Surface rock fragments: 5 percent cobbles; 60 percent gravel

Surface layer texture: Extremely gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Palinor: Indian ricegrass, black sagebrush, needleandthread

Zimbob: Indian ricegrass, Utah juniper, black sagebrush

Tecomar: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Inclusion 1: Indian ricegrass, bud sagebrush, shadscale, winterfat

Inclusion 2: None

Inclusion 3: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Inclusion 4: Thurber needlegrass, big sagebrush, bluebunch wheatgrass

Ecological Site

Palinor: 028BY011NV

Zimbob: 028BY059NV

Tecomar: 028BY008NV

Inclusion 1: 028BY075NV

Inclusion 2: None

Inclusion 3: 028BY052NV

Inclusion 4: 028BY007NV

852--Palinor-Pyrat-Shabliss association

Composition

Major Components

Palinor very gravelly loam, 4 to 15 percent slopes--40 percent

Pyrat gravelly sandy loam, 2 to 8 percent slopes--30 percent

Shabliss gravelly fine sandy loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Tulasie silt loam, 2 to 4 percent slopes--5 percent

Inclusion 2: Hundraw very gravelly loam, 8 to 30 percent slopes--5 percent

Inclusion 3: Urmafot very gravelly loam, 4 to 15 percent slopes--3 percent

Inclusion 4: Bobs gravelly loam, 4 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Palinor--Landform: Fan remnants

Pyrat--Landform: Fan remnants; position on slope: lower

Shabliss--Landform: Fan remnants

Inclusion 1--Landform: Inset fans

Inclusion 2--Landform: Pediments; geomorphic position: backslope

Inclusion 3--Landform: Fan remnants; position on slope: upper

Inclusion 4--Landform: Fan remnants; position on slope: upper

Major Component Description

Palinor Series

Elevation: 5,600 to 6,200 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Pyrat Series

Elevation: 5,600 to 6,200 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Shabliss Series

Elevation: 5,600 to 6,200 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 10 percent gravel

Surface layer texture: Gravelly fine sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Palinor: Indian ricegrass, black sagebrush, needleandthread

Pyrat: Indian ricegrass, Wyoming big sagebrush, needleandthread

Shabliss: Indian ricegrass, needleandthread

Inclusion 1: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat

Inclusion 2: Indian ricegrass, Utah juniper, black sagebrush, black sagebrush, black sagebrush, needleandthread

Inclusion 3: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Inclusion 4: Indian ricegrass, big sagebrush, bluebunch wheatgrass

Ecological Site

Palinor: 028BY011NV

Pyrat: 028BY010NV

Shabliss: 028BY080NV

Inclusion 1: 028BY045NV

Inclusion 2: 028BY083NV

Inclusion 3: 028BY006NV

Inclusion 4: 028BY094NV

854--Palinor-Automal-Shabliss association

Composition

Major Components

Palinor very gravelly loam, 2 to 8 percent slopes--45 percent

Automal gravelly silt loam, 4 to 15 percent slopes--30 percent

Shabliss gravelly fine sandy loam, 4 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Tulase silt loam, 0 to 4 percent slopes--7 percent

Inclusion 2: Wintermute gravelly silt loam, 2 to 8 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts

Palinor--Landform: Fan remnants

Automal--Landform: Fan remnants; position on slope: lower

Shabliss--Landform: Fan remnants

Inclusion 1--Landform: Inset fans

Inclusion 2--Landform: Fan remnants; position on slope: lower

Major Component Description

Palinor Series

Elevation: 5,700 to 6,600 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Automal Series

Elevation: 5,700 to 6,600 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 35 percent gravel

Surface layer texture: Gravelly silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Shabliss Series

Elevation: 5,700 to 6,600 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 10 percent gravel

Surface layer texture: Gravelly fine sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed

rocks, loess and volcanic ash

Dominant Present Vegetation

Palinor: Indian ricegrass, black sagebrush, needleandthread

Automal: Indian ricegrass, black sagebrush, needleandthread

Shabliss: Indian ricegrass, needleandthread

Inclusion 1: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat

Inclusion 2: Indian ricegrass, bud sagebrush, shadscale, winterfat

Ecological Site

Palinor: 028BY011NV

Automal: 028BY011NV

Shabliss: 028BY010NV

Inclusion 1: 028BY045NV

Inclusion 2: 028BY075NV

856--Palinor-Parisa association

Composition

Major Components

Palinor gravelly loam, 4 to 15 percent slopes--70 percent

Parisa gravelly loam, 4 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Urmafot very gravelly loam, 15 to 30 percent slopes--5 percent

Inclusion 2: Aridic Calcixerolls, loamy-skeletal, carbonatic, mesic gravelly loam, 4 to 15 percent slopes--5 percent

Inclusion 3: Urmafot very gravelly loam, 4 to 15 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts

Palinor--Landform: Fan remnants

Parisa--Landform: Fan remnants

Inclusion 1--Landform: Fan remnants; position on slope: upper

Inclusion 2--Landform: Fan remnants; position on slope: upper

Inclusion 3--Landform: Fan remnants; position on slope: upper

Major Component Description**Palinor Series**

Elevation: 5,900 to 7,000 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 30 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Parisa Series

Elevation: 5,900 to 7,000 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 65 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Dominant Present Vegetation

Palinor: Indian ricegrass, black sagebrush, needleandthread

Parisa: Indian ricegrass, Wyoming big sagebrush

Inclusion 1: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Inclusion 2: Indian ricegrass, big sagebrush

Inclusion 3: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Ecological Site

Palinor: 028BY011NV

Parisa: 028BY010NV

Inclusion 1: 028BY060NV

Inclusion 2: 028BY094NV

Inclusion 3: 028BY006NV

857--Palinor-Shabliss-Linoyer association***Composition*****Major Components**

Palinor very gravelly loam, 2 to 8 percent slopes--45 percent

Shabliss gravelly fine sandy loam, 2 to 8 percent slopes--30 percent

Linoyer silt loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Palinor very gravelly sandy loam, 8 to 15 percent slopes--5 percent

Inclusion 2: Parisa gravelly loam, 0 to 4 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts

Palinor--Landform: Fan remnants

Shabliss--Landform: Fan remnants

Linoyer--Landform: Fan skirts

Inclusion 1--Landform: Fan remnants; geomorphic position: backslope

Inclusion 2--Landform: Fan remnants

Major Component Description**Palinor Series**

Elevation: 5,600 to 6,500 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Shabliss Series

Elevation: 5,600 to 6,500 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Linoyer Series

Elevation: 5,600 to 6,500 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Palinor: Indian ricegrass, black sagebrush, needleandthread
 Shabliss: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Linoyer: Indian ricegrass, winterfat
 Inclusion 1: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread

Ecological Site

Palinor: 028BY011NV
 Shabliss: 028BY010NV
 Linoyer: 028BY013NV
 Inclusion 1: 028BY011NV
 Inclusion 2: 028BY010NV

858--Palinor-Automal-Linoyer association

Composition

Major Components

Palinor very gravelly loam, 2 to 8 percent slopes--55 percent
 Automal gravelly silt loam, 2 to 8 percent slopes--20 percent
 Linoyer silt loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Okan gravelly loam, 0 to 2 percent slopes--9 percent
 Inclusion 2: Shabliss gravelly sandy loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Palinor--Landform: Fan remnants
 Automal--Landform: Fan remnants

Linoyer--Landform: Fan skirts
 Inclusion 1--Landform: Inset fans
 Inclusion 2--Landform: Fan remnants

Major Component Description

Palinor Series

Elevation: 5,800 to 6,500 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Automal Series

Elevation: 5,800 to 6,500 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 35 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Linoyer Series

Elevation: 5,800 to 6,500 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Palinor: Indian ricegrass, black sagebrush, needleandthread
 Automal: Indian ricegrass, black sagebrush, needleandthread
 Linoyer: Indian ricegrass, winterfat
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread

Ecological Site

Palinor: 028BY011NV
 Automal: 028BY011NV
 Linoyer: 028BY013NV
 Inclusion 1: 028BY010NV

Inclusion 2: 028BY010NV

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

870--Theriot-Zimbob association

Composition

Major Components

Theriot very gravelly silt loam, 15 to 50 percent slopes--45 percent

Zimbob very gravelly loam, 15 to 50 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--5 percent

Inclusion 2: Tecomar very gravelly loam, 15 to 50 percent slopes--8 percent

Inclusion 3: Zimbob very gravelly loam, 8 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills

Theriot--Landform: Hills; geomorphic position: backslope; aspect: south

Zimbob--Landform: Hills; geomorphic position: backslope; aspect: north

Inclusion 1--Landform: Hills; geomorphic position: summit

Inclusion 2--Landform: Hills; geomorphic position: summit; position on slope: upper

Inclusion 3--Landform: Hills; geomorphic position: backslope

Major Component Description

Theriot Series

Elevation: 5,800 to 8,300 feet

Precipitation: About 6 inches

Air temperature: About 52 degrees

Frost-free season: About 130 days

Surface rock fragments: 5 percent cobbles; 50 percent gravel

Surface layer texture: Very gravelly silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Zimbob Series

Elevation: 5,800 to 8,300 feet

Precipitation: About 12 inches

Air temperature: About 47 degrees

Frost-free season: About 100 days

Surface rock fragments: 15 percent cobbles; 80 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant Present Vegetation

Theriot: Indian ricegrass, galleta, shadscale

Zimbob: Indian ricegrass, black sagebrush, needleandthread

Inclusion 1: None

Inclusion 2: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Inclusion 3: Indian ricegrass, Utah juniper, black sagebrush

Ecological Site

Theriot: 028AY003NV

Zimbob: 028BY016NV

Inclusion 1: None

Inclusion 2: 028BY008NV

Inclusion 3: 028BY059NV

880--Duffer, drained-Duffer-Kolda association

Composition

Major Components

Duffer silt loam, 0 to 2 percent slopes--40 percent

Duffer silty clay loam, 0 to 2 percent slopes--30 percent

Kolda silt loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Sycomat gravelly very fine sandy loam, 2 to 8 percent slopes--5 percent

Inclusion 2: Kunzler silt loam, 2 to 8 percent slopes--5 percent

Inclusion 3: Benin silt loam, 0 to 2 percent slopes--4 percent

Inclusion 4: Zerk gravelly loamy sand, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins

Duffer--Landform: Flood plains

Duffer--Landform: Flood plains

Kolda--Landform: Flood plains

Inclusion 1--Landform: Fan skirts

Inclusion 2--Landform: Fan skirts

Inclusion 3--Landform: Alluvial flats

Inclusion 4--Landform: Spits

Major Component Description

Duffer Series

Elevation: 5,600 to 6,800 feet

Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Somewhat poorly drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Duffer Series

Elevation: 5,600 to 6,800 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay loam
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Kolda Series

Elevation: 5,600 to 6,800 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Very poorly drained
 Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

Duffer: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Duffer: Alkali cordgrass, alkali sacaton, inland saltgrass
 Kolda: Bluegrass, rush, sedge
 Inclusion 1: Black greasewood, bottlebrush squirreltail, shadscale
 Inclusion 2: Basin wildrye, big sagebrush, black greasewood
 Inclusion 3: Alkali sacaton, black greasewood, inland saltgrass
 Inclusion 4: Indian ricegrass, winterfat

Ecological Site

Duffer: 028BY004NV
 Duffer: 028BY002NV
 Kolda: 028BY001NV
 Inclusion 1: 028BY074NV
 Inclusion 2: 028BY028NV
 Inclusion 3: 028BY020NV
 Inclusion 4: 028BY084NV

881--Duffer-Kunzler association

Composition

Major Components

Duffer silt loam, 0 to 2 percent slopes--45 percent
 Kunzler loam, 2 to 4 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Kolda silt loam, 0 to 2 percent slopes--5 percent
 Inclusion 2: Sycomat sandy loam, 0 to 2 percent slopes--5 percent
 Inclusion 3: Duffer silt loam, 0 to 2 percent slopes--3 percent
 Inclusion 4: Benin silt loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
 Duffer--Landform: Flood plains
 Kunzler--Landform: Fan skirts
 Inclusion 1--Landform: Flood plains
 Inclusion 2--Landform: Fan skirts
 Inclusion 3--Landform: Flood plains
 Inclusion 4--Landform: Alluvial flats

Major Component Description

Duffer Series

Elevation: 5,600 to 6,300 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Somewhat poorly drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Kunzler Series

Elevation: 5,600 to 6,300 feet
 Precipitation: About 8 inches
 Air temperature: About 48 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from sedimentary rocks

Dominant Present Vegetation

Duffer: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Kunzler: Basin wildrye, big sagebrush, black greasewood

Inclusion 1: Bluegrass, rush, sedge
 Inclusion 2: Black greasewood, bottlebrush squirreltail, shadscale
 Inclusion 3: Alkali cordgrass, alkali sacaton, inland saltgrass
 Inclusion 4: Alkali sacaton, black greasewood, inland saltgrass

Ecological Site

Duffer: 028BY004NV
 Kunzler: 028BY028NV
 Inclusion 1: 028BY001NV
 Inclusion 2: 028BY074NV
 Inclusion 3: 028BY002NV
 Inclusion 4: 028BY020NV

Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Very poorly drained
 Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

Duffer: Alkali cordgrass, alkali sacaton, inland saltgrass
 Kolda: Bluegrass, rush, sedge
 Inclusion 1: Basin wildrye, big sagebrush, black greasewood
 Inclusion 2: Black greasewood, bottlebrush squirreltail, shadscale
 Inclusion 3: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

882--Duffer-Kolda association

Composition

Major Components

Duffer silty clay loam, 0 to 2 percent slopes--45 percent
 Kolda silt loam, 0 to 2 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Kunzler fine sandy loam, 2 to 8 percent slopes--5 percent
 Inclusion 2: Sycomat gravelly very fine sandy loam, 2 to 8 percent slopes--5 percent
 Inclusion 3: Duffer silt loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
 Duffer--Landform: Fan skirts
 Kolda--Landform: Lake plains
 Inclusion 1--Landform: Fan skirts
 Inclusion 2--Landform: Fan skirts
 Inclusion 3--Landform: Fan skirts

Major Component Description

Duffer Series

Elevation: 5,600 to 6,500 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay loam
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Kolda Series

Elevation: 5,600 to 6,500 feet
 Precipitation: About 8 inches

Ecological Site

Duffer: 028BY002NV
 Kolda: 028BY001NV
 Inclusion 1: 028BY028NV
 Inclusion 2: 028BY074NV
 Inclusion 3: 028BY004NV

894--Zerk-Threese-Mazuma association

Composition

Major Components

Zerk gravelly sandy loam, 0 to 4 percent slopes--40 percent
 Threese very gravelly sandy loam, 0 to 4 percent slopes--25 percent
 Mazuma silt loam, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Durixerollic Camborthids, fine-loamy over sandy or sandy-skeletal, mixed, mesic silt loam, 0 to 2 percent slopes--5 percent
 Inclusion 2: Linoyer silt loam, 0 to 2 percent slopes--5 percent
 Inclusion 3: Zorravista fine sand, 2 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
 Zerk--Landform: Spits
 Threese--Landform: Barrier beaches
 Mazuma--Landform: Lagoons
 Inclusion 1--Landform: Lagoons
 Inclusion 2--Landform: Lagoons

Inclusion 3--Landform: Dunes

Major Component Description

Zerk Series

Elevation: 5,600 to 6,200 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Threese Series

Elevation: 5,600 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Mazuma Series

Elevation: 5,600 to 6,200 feet
 Precipitation: About 6 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Dominant Present Vegetation

Zerk: Indian ricegrass, bud sagebrush, shadscale, winterfat
 Threese: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Mazuma: Indian ricegrass, bottlebrush squirreltail, shadscale
 Inclusion 1: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail
 Inclusion 2: Indian ricegrass, winterfat
 Inclusion 3: Indian ricegrass, big sagebrush, needleandthread, thickspike wheatgrass

Ecological Site

Zerk: 028BY075NV
 Threese: 028BY010NV
 Mazuma: 028BY009NV
 Inclusion 1: 028BY056NV

Inclusion 2: 028BY013NV

Inclusion 3: 028BY005NV

900--Zerk-Automal-Linoyer association

Composition

Major Components

Zerk gravelly sandy loam, 2 to 8 percent slopes--45 percent
 Automal gravelly silt loam, 2 to 8 percent slopes--25 percent
 Linoyer silt loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Zerk gravelly loam, 0 to 4 percent slopes--5 percent
 Inclusion 2: Mazuma silty clay loam, 0 to 2 percent slopes--5 percent
 Inclusion 3: Threese gravelly sandy loam, 2 to 8 percent slopes--3 percent
 Inclusion 4: Typic Torriorthents, sandy-skeletal, mixed, mesic gravelly sandy loam, 0 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
 Zerk--Landform: Spits
 Automal--Landform: Barrier beaches
 Linoyer--Landform: Lagoons
 Inclusion 1--Landform: Spits
 Inclusion 2--Landform: Lagoons
 Inclusion 3--Landform: Spits
 Inclusion 4--Landform: Drainageways

Major Component Description

Zerk Series

Elevation: 5,600 to 5,900 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Automal Series

Elevation: 5,600 to 5,900 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 35 percent gravel
 Surface layer texture: Gravelly silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Linoyer Series

Elevation: 5,600 to 5,900 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Zerk: Indian ricegrass, winterfat

Automal: Indian ricegrass, black sagebrush, needleandthread

Linoyer: Indian ricegrass, winterfat

Inclusion 1: Indian ricegrass, bud sagebrush, shadscale, winterfat

Inclusion 2: Bottlebrush squirreltail, shadscale

Inclusion 3: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 4: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Ecological Site

Zerk: 028BY084NV

Automal: 028BY011NV

Linoyer: 028BY013NV

Inclusion 1: 028BY075NV

Inclusion 2: 028BY073NV

Inclusion 3: 028BY010NV

Inclusion 4: 028BY052NV

910--Ragtown association

Composition

Major Components

Ragtown silty clay loam, 0 to 2 percent slopes--65 percent

Ragtown silt loam, 0 to 2 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Katelana silt loam, 0 to 2 percent slopes--10 percent

Map Unit Setting

Landscape position: Intermontane basins

Ragtown--Landform: Lake plains

Ragtown--Landform: Lake plains

Inclusion 1--Landform: Lake plains

Major Component Description

Ragtown Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 6 inches

Air temperature: About 51 degrees

Frost-free season: About 120 days

Surface layer texture: Silty clay loam

Drainage class: Moderately well drained

Dominant parent material: Lacustrine sediments derived from volcanic rocks

Ragtown Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 6 inches

Air temperature: About 51 degrees

Frost-free season: About 120 days

Surface layer texture: Silt loam

Drainage class: Moderately well drained

Dominant parent material: Lacustrine sediments derived from volcanic rocks

Dominant Present Vegetation

Ragtown: Black greasewood, bottlebrush squirreltail, sickle saltbush

Ragtown: Indian ricegrass, sickle saltbush, western wheatgrass

Inclusion 1: Bottlebrush squirreltail, shadscale

Ecological Site

Ragtown: 028BY097NV

Ragtown: 028BY047NV

Inclusion 1: 028BY073NV

912--Katelana association

Composition

Major Components

Katelana silt loam, 0 to 2 percent slopes--50 percent

Katelana silt loam, 0 to 2 percent slopes, ponded--35 percent

Contrasting Inclusions

Inclusion 1: Katelana very fine sandy loam, 0 to 2 percent slopes--5 percent

Inclusion 2: Kawich fine sand, 4 to 15 percent slopes--5 percent

Inclusion 3: Piltown loamy fine sand, 2 to 8 percent slopes--4 percent

Inclusion 4: Playas, 0 to 1 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins

Katelana--Landform: Lake plains
 Katelana--Landform: Lake plains
 Inclusion 1--Landform: Lake plains
 Inclusion 2--Landform: Dunes
 Inclusion 3--Landform: Barrier beaches
 Inclusion 4--Landform: Fan remnants

Major Component Description

Katelana Series

Elevation: 5,600 to 6,100 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone
 and dolomite over lacustrine sediments

Katelana Series

Elevation: 5,600 to 6,100 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone
 and dolomite over lacustrine sediments

Dominant Present Vegetation

Katelana: Black greasewood, bottlebrush squirreltail,
 shadscale
 Katelana: Bottlebrush squirreltail, shadscale
 Inclusion 1: Thickspike wheatgrass, western
 wheatgrass, winterfat
 Inclusion 2: Indian ricegrass, black greasewood,
 shadscale, thickspike wheatgrass
 Inclusion 3: Black greasewood, bottlebrush squirreltail,
 sickle saltbush
 Inclusion 4: None

Ecological Site

Katelana: 028BY074NV
 Katelana: 028BY073NV
 Inclusion 1: 028BY071NV
 Inclusion 2: 028BY021NV
 Inclusion 3: 028BY097NV
 Inclusion 4: None

914--Katelana-Benin-Sheffit association

Composition

Major Components

Katelana silt loam, 0 to 2 percent slopes--45 percent
 Benin silt loam, 0 to 2 percent slopes--25 percent
 Sheffit sandy loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Kawich loamy sand, 4 to 15 percent slopes--
 5 percent
 Inclusion 2: Playas silty clay, 0 to 1 percent slopes--5
 percent
 Inclusion 3: Katelana silt loam, 0 to 2 percent slopes--5
 percent

Map Unit Setting

Landscape position: Intermontane basins
 Katelana--Landform: Lake plains
 Benin--Landform: Lake plains
 Sheffit--Landform: Lake plains
 Inclusion 1--Landform: Dunes
 Inclusion 2--Landform: Fan remnants
 Inclusion 3--Landform: Lake plains

Major Component Description

Katelana Series

Elevation: 6,100 to 6,130 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone
 and dolomite over lacustrine sediments

Benin Series

Elevation: 6,100 to 6,130 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed
 rocks over lacustrine sediments

Sheffit Series

Elevation: 6,100 to 6,130 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days

Surface layer texture: Sandy loam
 Drainage class: Moderately well drained
 Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

Katelana: Black greasewood, bottlebrush squirreltail, shadscale
 Benin: Alkali sacaton, black greasewood, inland saltgrass
 Sheffit: Basin wildrye, big sagebrush, black greasewood
 Inclusion 1: Indian ricegrass, black greasewood, shadscale, thickspike wheatgrass
 Inclusion 2: None
 Inclusion 3: Thickspike wheatgrass, western wheatgrass, winterfat

Ecological Site

Katelana: 028BY074NV
 Benin: 028BY020NV
 Sheffit: 028BY028NV
 Inclusion 1: 028BY021NV
 Inclusion 2: None
 Inclusion 3: 028BY071NV

917--Katelana-Sheffit-Ragtown association

Composition

Major Components

Katelana silt loam, 0 to 2 percent slopes--50 percent
 Sheffit silt loam, 0 to 2 percent slopes--20 percent
 Ragtown silty clay loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Katelana silt loam, 0 to 2 percent slopes--5 percent
 Inclusion 2: Ragtown silt loam, 0 to 2 percent slopes--5 percent
 Inclusion 3: Playas silty clay loam, 0 to 1 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
 Katelana--Landform: Lake plains
 Sheffit--Landform: Lake plains
 Ragtown--Landform: Lake plains
 Inclusion 1--Landform: Lake plains
 Inclusion 2--Landform: Lake plains
 Inclusion 3--Landform: Fan remnants

Major Component Description

Katelana Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite over lacustrine sediments

Sheffit Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Moderately well drained
 Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Ragtown Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 6 inches
 Air temperature: About 51 degrees
 Frost-free season: About 120 days
 Surface layer texture: Silty clay loam
 Drainage class: Moderately well drained
 Dominant parent material: Lacustrine sediments derived from volcanic rocks

Dominant Present Vegetation

Katelana: Black greasewood, bottlebrush squirreltail, shadscale
 Sheffit: Basin wildrye, big sagebrush, black greasewood
 Ragtown: Black greasewood, bottlebrush squirreltail, sickle saltbush
 Inclusion 1: Bottlebrush squirreltail, shadscale
 Inclusion 2: Indian ricegrass, sickle saltbush, western wheatgrass
 Inclusion 3: None

Ecological Site

Katelana: 028BY074NV
 Sheffit: 028BY028NV
 Ragtown: 028BY097NV
 Inclusion 1: 028BY073NV
 Inclusion 2: 028BY047NV

Inclusion 3: None

Surface layer texture: Silty clay loam
Drainage class: Very poorly drained

918--Katelana-Zorravista-Playas association

Composition

Major Components

Katelana silt loam, 0 to 2 percent slopes--45 percent
Zorravista loamy fine sand, 2 to 8 percent slopes--25 percent
Playas silty clay loam, 0 to 1 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Sheffit silt loam, 0 to 2 percent slopes--6 percent
Inclusion 2: Ragtown silt loam, 0 to 2 percent slopes--4 percent
Inclusion 3: Ragtown silt loam, 0 to 2 percent slopes--3 percent
Inclusion 4: Duffer silt loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins

Katelana--Landform: Lake plains
Zorravista--Landform: Dunes
Playas--Landform: Lake plains
Inclusion 1--Landform: Lake plains
Inclusion 2--Landform: Lake plains
Inclusion 3--Landform: Lake plains
Inclusion 4--Landform: Stream terraces

Major Component Description

Katelana Series

Elevation: 5,600 to 6,000 feet
Precipitation: About 7 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface layer texture: Silt loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from limestone and dolomite over lacustrine sediments

Zorravista Series

Elevation: 5,600 to 6,000 feet
Precipitation: About 8 inches
Air temperature: About 48 degrees
Frost-free season: About 115 days
Surface layer texture: Loamy fine sand
Drainage class: Excessively drained
Dominant parent material: Eolian material

Playas Miscellaneous Area

Elevation: 5,600 to 6,000 feet

Dominant Present Vegetation

Katelana: Black greasewood, bottlebrush squirreltail, shadscale
Zorravista: Indian ricegrass, big sagebrush, thickspike wheatgrass
Playas: None
Inclusion 1: Basin wildrye, big sagebrush, black greasewood
Inclusion 2: Black greasewood, bottlebrush squirreltail, sickle saltbush
Inclusion 3: Indian ricegrass, sickle saltbush, western wheatgrass
Inclusion 4: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Ecological Site

Katelana: 028BY074NV
Zorravista: 028BY068NV
Playas: None
Inclusion 1: 028BY028NV
Inclusion 2: 028BY097NV
Inclusion 3: 028BY047NV
Inclusion 4: 028BY004NV

930--Okan-Toano-Loray association

Composition

Major Components

Okan sandy loam, 2 to 8 percent slopes--40 percent
Toano silt loam, 0 to 4 percent slopes--30 percent
Loray gravelly sandy loam, 0 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Linoyer silt loam, 0 to 2 percent slopes--7 percent
Inclusion 2: Okan gravelly sandy loam, 8 to 30 percent slopes--5 percent
Inclusion 3: Xerollic Durorthids, loamy-skeletal, mixed, mesic, shallow gravelly sandy loam, 2 to 4 percent slopes--2 percent
Inclusion 4: Playas silty clay loam, 0 to 1 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins

Okan--Landform: Fan skirts
Toano--Landform: Fan skirts; position on slope: lower
Loray--Landform: Barrier beaches
Inclusion 1--Landform: Fan skirts
Inclusion 2--Landform: Spits; geomorphic position:

backslope

Inclusion 3--Landform: Spits

Inclusion 4--Landform: Lagoons

Major Component Description

Okan Series

Elevation: 5,800 to 6,200 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Toano Series

Elevation: 5,800 to 6,200 feet

Precipitation: About 7 inches

Air temperature: About 47 degrees

Frost-free season: About 115 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Loray Series

Elevation: 5,800 to 6,200 feet

Precipitation: About 6 inches

Air temperature: About 50 degrees

Frost-free season: About 110 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Somewhat excessively drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Okan: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Toano: Indian ricegrass, sickle saltbush, western wheatgrass

Loray: Indian ricegrass, bud sagebrush, shadscale

Inclusion 1: Indian ricegrass, winterfat

Inclusion 2: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Inclusion 3: Indian ricegrass, black sagebrush, needleandthread

Inclusion 4: None

Ecological Site

Okan: 028BY052NV

Toano: 028BY047NV

Loray: 028AY012NV

Inclusion 1: 028BY013NV

Inclusion 2: 028BY052NV

Inclusion 3: 028BY011NV

Inclusion 4: None

932--Okan-Pyrat association

Composition

Major Components

Okan sandy loam, 2 to 8 percent slopes--50 percent

Pyrat gravelly sandy loam, 2 to 8 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Okan very gravelly loamy sand, 2 to 8 percent slopes--8 percent

Inclusion 2: Xeric Torripsamments, mixed, mesic gravelly loamy sand, 2 to 15 percent slopes--3 percent

Inclusion 3: Pyrat extremely gravelly sandy loam, 2 to 8 percent slopes--2 percent

Inclusion 4: Kunzler sandy loam, 2 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Okan--Landform: Fan skirts

Pyrat--Landform: Fan skirts

Inclusion 1--Landform: Fan skirts

Inclusion 2--Landform: Sand sheets

Inclusion 3--Landform: Fan skirts

Inclusion 4--Landform: Fan skirts; position on slope: lower

Major Component Description

Okan Series

Elevation: 5,600 to 6,000 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Pyrat Series

Elevation: 5,600 to 6,000 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Okan: Indian ricegrass, Wyoming big sagebrush, needleandthread

Pyrat: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 1: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Inclusion 2: Indian ricegrass, big sagebrush, needleandthread, thickspike wheatgrass

Inclusion 3: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Inclusion 4: Basin wildrye, big sagebrush, black greasewood

Ecological Site

Okan: 028BY010NV

Pyrat: 028BY010NV

Inclusion 1: 028BY052NV

Inclusion 2: 028BY005NV

Inclusion 3: 028BY052NV

Inclusion 4: 028BY028NV

941--Sheffit-Zorravista association

Composition

Major Components

Sheffit silt loam, 0 to 2 percent slopes--45 percent

Sheffit fine sandy loam, 0 to 2 percent slopes--25 percent

Zorravista loamy fine sand, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Durorthidic Xeric Torriorthents, coarse-loamy, mixed (calcareous), mesic silt loam, 0 to 2 percent slopes--8 percent

Inclusion 2: Katelana silt loam, 0 to 2 percent slopes--7 percent

Map Unit Setting

Landscape position: Intermontane basins

Sheffit--Landform: Lake plains

Sheffit--Landform: Lake plains

Zorravista--Landform: Dunes

Inclusion 1--Landform: Lake plains

Inclusion 2--Landform: Lake plains

Major Component Description

Sheffit Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Moderately well drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Sheffit Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Fine sandy loam

Drainage class: Moderately well drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Zorravista Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 8 inches

Air temperature: About 48 degrees

Frost-free season: About 115 days

Surface layer texture: Loamy fine sand

Drainage class: Excessively drained

Dominant parent material: Eolian material

Dominant Present Vegetation

Sheffit: Basin wildrye, big sagebrush, black greasewood

Sheffit: Basin wildrye, big sagebrush, creeping wildrye

Zorravista: Indian ricegrass, big sagebrush, thickspike wheatgrass

Inclusion 1: Basin wildrye, big sagebrush, black greasewood

Inclusion 2: Black greasewood, bottlebrush squirreltail, shadscale

Ecological Site

Sheffit: 028BY028NV

Sheffit: 028AY025NV

Zorravista: 028BY068NV

Inclusion 1: 028BY028NV

Inclusion 2: 028BY074NV

943--Sheffit-Umberland association

Composition

Major Components

Sheffit silt loam, 0 to 2 percent slopes--45 percent

Umberland silty clay, 0 to 2 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Ragtown silty clay loam, 0 to 2 percent slopes--6 percent
 Inclusion 2: Katelana silt loam, 0 to 2 percent slopes--5 percent
 Inclusion 3: Aeris Halaquepts, fine, montmorillonitic (calcareous), mesic fine sandy loam, 0 to 2 percent slopes--4 percent

Map Unit Setting

Landscape position: Intermontane basins
 Sheffit--Landform: Lake plains
 Umberland--Landform: Lake plains
 Inclusion 1--Landform: Lake plains
 Inclusion 2--Landform: Lake plains
 Inclusion 3--Landform: Lake plains

Major Component Description**Sheffit Series**

Elevation: 5,600 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Moderately well drained
 Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Umberland Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Somewhat poorly drained
 Dominant parent material: Lacustrine sediments derived from volcanic rocks

Dominant Present Vegetation

Sheffit: Basin wildrye, big sagebrush, black greasewood
 Umberland: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Inclusion 1: Black greasewood, bottlebrush squirreltail, sickle saltbush
 Inclusion 2: Black greasewood, bottlebrush squirreltail, shadscale
 Inclusion 3: Inland saltgrass, iodinebush

Ecological Site

Sheffit: 028BY028NV
 Umberland: 028BY004NV
 Inclusion 1: 028BY097NV

Inclusion 2: 028BY074NV

Inclusion 3: 028AY009NV

960--Gravier-Zerk association**Composition****Major Components**

Gravier very gravelly sandy loam, 2 to 8 percent slopes--75 percent
 Zerk gravelly sandy loam, 0 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Xerollic Durorthids, loamy-skeletal, mixed, mesic, shallow very gravelly loam, 4 to 15 percent slopes--5 percent
 Inclusion 2: Piltdown loamy fine sand, 2 to 4 percent slopes--4 percent
 Inclusion 3: Threesee gravelly sandy loam, 4 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
 Gravier--Landform: Barrier beaches
 Zerk--Landform: Barrier beaches
 Inclusion 1--Landform: Spits; geomorphic position: backslope
 Inclusion 2--Landform: Barrier beaches
 Inclusion 3--Landform: Spits

Major Component Description**Gravier Series**

Elevation: 5,600 to 6,200 feet
 Precipitation: About 6 inches
 Air temperature: About 50 degrees
 Frost-free season: About 115 days
 Surface rock fragments: 45 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Zerk Series

Elevation: 5,600 to 6,200 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Gravier: Indian ricegrass, winterfat

Zerk: Indian ricegrass, bud sagebrush, shadscale, winterfat

Inclusion 1: Indian ricegrass, black sagebrush, needleandthread

Inclusion 2: Black greasewood, bottlebrush squirreltail, sickle saltbush

Inclusion 3: Indian ricegrass, Wyoming big sagebrush, needleandthread

Ecological Site

Gravier: 028BY084NV

Zerk: 028BY075NV

Inclusion 1: 028BY011NV

Inclusion 2: 028BY097NV

Inclusion 3: 028BY010NV

961--Gravier-Piltdown-Zerk association***Composition*****Major Components**

Gravier loamy sand, 0 to 2 percent slopes--45 percent

Piltdown fine sandy loam, 2 to 8 percent slopes--30 percent

Zerk gravelly sandy loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Katelana silt loam, 0 to 2 percent slopes--10 percent

Map Unit Setting

Landscape position: Intermontane basins

Gravier--Landform: Barrier beaches

Piltdown--Landform: Sand sheets

Zerk--Landform: Barrier beaches

Inclusion 1--Landform: Lake plains

Major Component Description**Gravier Series**

Elevation: 5,700 to 5,800 feet

Precipitation: About 6 inches

Air temperature: About 50 degrees

Frost-free season: About 115 days

Surface layer texture: Loamy sand

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Piltdown Series

Elevation: 5,700 to 5,800 feet

Precipitation: About 7 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface layer texture: Fine sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Zerk Series

Elevation: 5,700 to 5,800 feet

Precipitation: About 7 inches

Air temperature: About 47 degrees

Frost-free season: About 120 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Gravier: Indian ricegrass, winterfat

Piltdown: Indian ricegrass, fourwing saltbush, winterfat

Zerk: Indian ricegrass, bud sagebrush, shadscale, winterfat

Inclusion 1: Bottlebrush squirreltail, shadscale

Ecological Site

Gravier: 028BY084NV

Piltdown: 029XY012NV

Zerk: 028BY075NV

Inclusion 1: 028BY073NV

972--Zimbob-Pookaloo association***Composition*****Major Components**

Zimbob very gravelly loam, 15 to 50 percent slopes--40 percent

Zimbob very gravelly loam, very shallow, 15 to 50 percent slopes--30 percent

Pookaloo very gravelly loam, 15 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Durixerollic Calciorthids, loamy-skeletal, carbonatic, mesic very gravelly silt loam, 2 to 8 percent slopes--6 percent

Inclusion 2: Tecomar extremely gravelly silt loam, 15 to 50 percent slopes--5 percent

Inclusion 3: Hyzen extremely stony loam, 15 to 50 percent slopes--2 percent

Inclusion 4: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Hills

Zimbob--Landform: Hills; geomorphic position: backslope; aspect: south

Zimbob--Landform: Hills

Pookaloo--Landform: Hills; geomorphic position: backslope; aspect: north

Inclusion 1--Landform: Drainageways

Inclusion 2--Landform: Hills; geomorphic position: backslope; aspect: north

Inclusion 3--Landform: Hills; geomorphic position: summit

Inclusion 4--Landform: Hills; geomorphic position: summit

Major Component Description

Zimbob Series

Elevation: 5,800 to 7,200 feet

Precipitation: About 12 inches

Air temperature: About 47 degrees

Frost-free season: About 100 days

Surface rock fragments: 15 percent cobbles; 80 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Zimbob Series

Elevation: 5,800 to 7,200 feet

Precipitation: About 12 inches

Air temperature: About 47 degrees

Frost-free season: About 100 days

Surface rock fragments: 15 percent cobbles; 80 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Pookaloo Series

Elevation: 5,800 to 7,200 feet

Precipitation: About 12 inches

Air temperature: About 46 degrees

Frost-free season: About 100 days

Surface rock fragments: 50 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Zimbob: Indian ricegrass, black sagebrush, needleandthread

Zimbob: Indian ricegrass, Utah juniper, black sagebrush

Pookaloo: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Inclusion 1: Indian ricegrass, big sagebrush, bluebunch wheatgrass

Inclusion 2: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Inclusion 3: Indian ricegrass, Scribner needlegrass, black sagebrush, littleleaf mountainmahogany

Inclusion 4: None

Ecological Site

Zimbob: 028BY016NV

Zimbob: 028BY059NV

Pookaloo: 028BY060NV

Inclusion 1: 028BY094NV

Inclusion 2: 028BY008NV

Inclusion 3: 028BY066NV

Inclusion 4: None

974--Zimbob-Tecomar-Pookaloo association

Composition

Major Components

Zimbob very gravelly loam, 8 to 30 percent slopes--40 percent

Tecomar extremely gravelly loam, 8 to 30 percent slopes--30 percent

Pookaloo very gravelly loam, 8 to 30 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Zimbob gravelly sandy loam, 4 to 15 percent slopes--4 percent

Inclusion 2: Okan loam, 0 to 4 percent slopes--4 percent

Inclusion 3: Okan sandy loam, 0 to 4 percent slopes--4 percent

Inclusion 4: Automal gravelly loam, 2 to 8 percent slopes--3 percent

Map Unit Setting

Landscape position: Hills

Zimbob--Landform: Hills; geomorphic position: backslope; aspect: south

Tecomar--Landform: Hills; geomorphic position: backslope; aspect: north
 Pookaloo--Landform: Hills; geomorphic position: backslope; aspect: north
 Inclusion 1--Landform: Hills; geomorphic position: backslope; position on slope: lower
 Inclusion 2--Landform: Drainageways
 Inclusion 3--Landform: Drainageways
 Inclusion 4--Landform: Fan remnants

Major Component Description

Zimbob Series

Elevation: 5,800 to 7,400 feet
 Precipitation: About 12 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 15 percent cobbles; 80 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Tecomar Series

Elevation: 5,800 to 7,400 feet
 Precipitation: About 12 inches
 Air temperature: About 46 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 5 percent cobbles; 90 percent gravel
 Surface layer texture: Extremely gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Pookaloo Series

Elevation: 5,800 to 7,400 feet
 Precipitation: About 12 inches
 Air temperature: About 46 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 50 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Zimbob: Indian ricegrass, black sagebrush, needleandthread
 Tecomar: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Pookaloo: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Inclusion 1: Indian ricegrass, Utah juniper, black sagebrush
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat
 Inclusion 3: Indian ricegrass, Wyoming big sagebrush, spiny hopsage
 Inclusion 4: Indian ricegrass, black sagebrush, needleandthread

Ecological Site

Zimbob: 028BY016NV
 Tecomar: 028BY008NV
 Pookaloo: 028BY060NV
 Inclusion 1: 028BY059NV
 Inclusion 2: 028BY045NV
 Inclusion 3: 028BY052NV
 Inclusion 4: 028BY011NV

975--Tecomar-Zimbob association

Composition

Major Components

Zimbob very gravelly loam, 15 to 50 percent slopes--40 percent
 Tecomar extremely gravelly loam, 15 to 50 percent slopes--30 percent
 Tecomar extremely gravelly loam, moist, 15 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--7 percent
 Inclusion 2: Pookaloo very gravelly loam, 15 to 50 percent slopes--5 percent
 Inclusion 3: Xeric Torriorthents sandy loam, 2 to 8 percent slopes--2 percent
 Inclusion 4: Zimbob gravelly loam, 4 to 15 percent slopes--1 percent

Map Unit Setting

Landscape position: Mountains
 Zimbob--Landform: Mountains; geomorphic position: backslope; aspect: north
 Tecomar--Landform: Mountains; geomorphic position: backslope; aspect: south
 Tecomar--Landform: Mountains; geomorphic position: summit
 Inclusion 1--Landform: Mountains; geomorphic position: summit
 Inclusion 2--Landform: Mountains; geomorphic position: backslope; aspect: north
 Inclusion 3--Landform: Drainageways
 Inclusion 4--Landform: Mountains; geomorphic position: summit; position on slope: lower

Major Component Description**Zimbob Series**

Elevation: 5,300 to 7,600 feet
 Precipitation: About 12 inches
 Air temperature: About 46 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 5 percent cobbles; 90 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Tecomar Series

Elevation: 5,300 to 7,600 feet
 Precipitation: About 12 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 15 percent cobbles; 80 percent gravel
 Surface layer texture: Extremely gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Tecomar Series

Elevation: 5,300 to 7,600 feet
 Precipitation: About 12 inches
 Air temperature: About 46 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 5 percent cobbles; 90 percent gravel
 Surface layer texture: Extremely gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Zimbob: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Tecomar: Indian ricegrass, black sagebrush, needleandthread
 Tecomar: Black sagebrush, bluebunch wheatgrass, singleleaf pinyon
 Inclusion 1: None
 Inclusion 2: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon
 Inclusion 3: Indian ricegrass, big sagebrush, bluebunch wheatgrass
 Inclusion 4: Indian ricegrass, Utah juniper, black sagebrush

Ecological Site

Zimbob: 028BY016NV
 Tecomar: 028BY008NV
 Tecomar: 028BY090NV
 Inclusion 1: None
 Inclusion 2: 028BY060NV
 Inclusion 3: 028BY094NV
 Inclusion 4: 028BY059NV

980--Onkeyo-Pookaloo-Zimbob association**Composition****Major Components**

Onkeyo very gravelly silt loam, 15 to 50 percent slopes--35 percent
 Pookaloo very gravelly loam, 15 to 50 percent slopes--30 percent
 Zimbob very gravelly loam, 15 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Aridic Calcixerolls, loamy-skeletal, mixed, mesic very gravelly loam, 4 to 15 percent slopes--8 percent
 Inclusion 2: Lithic Argixerolls, loamy-skeletal, mixed, mesic very stony loam, 8 to 30 percent slopes--4 percent
 Inclusion 3: Lithic Calcixerolls, loamy-skeletal, mixed, mesic very gravelly silt loam, 15 to 50 percent slopes--2 percent
 Inclusion 4: Rock outcrop--1 percent

Map Unit Setting

Landscape position: Hills
 Onkeyo--Landform: Hills; geomorphic position: backslope; aspect: north
 Pookaloo--Landform: Hills; geomorphic position: backslope; aspect: south
 Zimbob--Landform: Hills; geomorphic position: backslope; position on slope: lower
 Inclusion 1--Landform: Drainageways
 Inclusion 2--Landform: Hills; geomorphic position: backslope
 Inclusion 3--Landform: Hills; geomorphic position: backslope; aspect: south
 Inclusion 4--Landform: Hills; geomorphic position: summit

Major Component Description**Onkeyo Series**

Elevation: 6,400 to 8,000 feet
 Precipitation: About 14 inches

Air temperature: About 44 degrees
 Frost-free season: About 90 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from limestone and dolomite

Pookaloo Series

Elevation: 6,400 to 8,000 feet
 Precipitation: About 12 inches
 Air temperature: About 46 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 50 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from limestone and dolomite

Zimbob Series

Elevation: 6,400 to 7,000 feet
 Precipitation: About 12 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 15 percent cobbles; 80 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from limestone and dolomite

Dominant Present Vegetation

Onkeyo: Indian ricegrass, bluebunch wheatgrass, mountain big sagebrush
 Pookaloo: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon
 Zimbob: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Inclusion 1: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
 Inclusion 2: Utah serviceberry, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
 Inclusion 3: Bluebunch wheatgrass, bluegrass, mountain big sagebrush
 Inclusion 4: None

Ecological Site

Onkeyo: 028BY079NV
 Pookaloo: 028BY060NV
 Zimbob: 028BY008NV
 Inclusion 1: 028BY007NV
 Inclusion 2: 028BY026NV

Inclusion 3: 028BY088NV
 Inclusion 4: None

990--Hyzen-Zimbob association

Composition

Major Components

Hyzen extremely stony loam, 30 to 75 percent slopes--70 percent
 Zimbob very gravelly loam, 30 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--10 percent
 Inclusion 2: Pookaloo very gravelly loam, 30 to 50 percent slopes--5 percent

Map Unit Setting

Landscape position: Mountains

Hyzen--Landform: Mountains; geomorphic position: backslope

Zimbob--Landform: Mountains; geomorphic position: backslope

Inclusion 1--Landform: Mountains; geomorphic position: summit

Inclusion 2--Landform: Mountains; geomorphic position: backslope; aspect: north

Major Component Description

Hyzen Series

Elevation: 6,200 to 7,900 feet
 Precipitation: About 13 inches
 Air temperature: About 44 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 5 percent cobbles; 45 percent gravel
 Surface layer texture: Extremely stony loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from limestone and dolomite

Zimbob Series

Elevation: 6,200 to 7,900 feet
 Precipitation: About 12 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 15 percent cobbles; 80 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from limestone and dolomite

Dominant Present Vegetation

Hyzen: Indian ricegrass, Scribner needlegrass, black sagebrush, littleleaf mountainmahogany

Zimbob: Indian ricegrass, Utah juniper, black sagebrush

Inclusion 1: None

Inclusion 2: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Ecological Site

Hyzen: 028BY066NV

Zimbob: 028BY059NV

Inclusion 1: None

Inclusion 2: 028BY060NV

Major Component Description***Hyzen Series***

Elevation: 6,100 to 7,200 feet

Precipitation: About 13 inches

Air temperature: About 44 degrees

Frost-free season: About 85 days

Surface rock fragments: 5 percent cobbles; 45 percent gravel

Surface layer texture: Extremely stony loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Cavehill Series

Elevation: 6,100 to 7,200 feet

Precipitation: About 14 inches

Air temperature: About 44 degrees

Frost-free season: About 80 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Very gravelly silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Tecomar Series

Elevation: 6,100 to 7,200 feet

Precipitation: About 12 inches

Air temperature: About 46 degrees

Frost-free season: About 100 days

Surface rock fragments: 5 percent cobbles; 60 percent gravel

Surface layer texture: Extremely gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

991--Hyzen-Cavehill-Tecomar association***Composition******Major Components***

Hyzen extremely stony loam, 15 to 50 percent slopes--45 percent

Cavehill very gravelly silt loam, 15 to 50 percent slopes--25 percent

Tecomar extremely gravelly loam, 15 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Adobe very gravelly loam, 15 to 50 percent slopes--5 percent

Inclusion 2: Wardbay very gravelly silt loam, 15 to 50 percent slopes--5 percent

Inclusion 3: Rock outcrop--3 percent

Inclusion 4: Aridic Calcixerolls, loamy-skeletal, mixed, frigid gravelly silt loam, 15 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains

Hyzen--Landform: Mountains; geomorphic position: summit

Cavehill--Landform: Mountains; geomorphic position: backslope; aspect: north

Tecomar--Landform: Mountains; geomorphic position: backslope

Inclusion 1--Landform: Mountains; geomorphic position: summit; position on slope: upper

Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: upper

Inclusion 3--Landform: Mountains; geomorphic position: summit

Inclusion 4--Landform: Mountains; geomorphic position: backslope; position on slope: lower; shape of slope: concave

Dominant Present Vegetation

Hyzen: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Cavehill: Bluebunch wheatgrass, curleaf mountainmahogany, mountain big sagebrush, singleleaf pinyon

Tecomar: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Inclusion 1: Black sagebrush, bluebunch wheatgrass

Inclusion 2: Bluebunch wheatgrass, mountain big sagebrush

Inclusion 3: None

Inclusion 4: Bluebunch wheatgrass, bluegrass, mountain big sagebrush

Ecological Site

Hyzen: 028BY060NV

Cavehill: 028BY058NV
 Tecomar: 028BY008NV
 Inclusion 1: 028BY027NV
 Inclusion 2: 028BY070NV
 Inclusion 3: None
 Inclusion 4: 028BY088NV

Frost-free season: About 120 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

1000--Pyrat-Zerk association

Composition

Major Components

Pyrat gravelly sandy loam, 2 to 4 percent slopes--65 percent
 Zerk gravelly sandy loam, 2 to 4 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Wintermute sandy loam, 2 to 4 percent slopes--5 percent
 Inclusion 2: Tulase silt loam, 2 to 4 percent slopes--5 percent
 Inclusion 3: Linoyer fine sandy loam, 2 to 4 percent slopes--3 percent
 Inclusion 4: Typic Torriorthents, fine-loamy, mixed (calcareous), mesic silt loam, 2 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Pyrat--Landform: Fan remnants
 Zerk--Landform: Fan remnants; position on slope: lower
 Inclusion 1--Landform: Fan remnants; position on slope: lower
 Inclusion 2--Landform: Inset fans
 Inclusion 3--Landform: Inset fans
 Inclusion 4--Landform: Fan remnants; position on slope: lower

Major Component Description

Pyrat Series

Elevation: 5,700 to 6,500 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Zerk Series

Elevation: 5,700 to 6,500 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees

Dominant Present Vegetation

Pyrat: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Zerk: Indian ricegrass, winterfat
 Inclusion 1: Indian ricegrass, bud sagebrush, shadscale, winterfat
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat
 Inclusion 3: Indian ricegrass, winterfat
 Inclusion 4: Indian ricegrass, bud sagebrush, shadscale

Ecological Site

Pyrat: 028BY010NV
 Zerk: 028BY084NV
 Inclusion 1: 028BY075NV
 Inclusion 2: 028BY045NV
 Inclusion 3: 028BY013NV
 Inclusion 4: 028BY017NV

1001--Pyrat-Okan-Eastwell association

Composition

Major Components

Pyrat gravelly sandy loam, 2 to 8 percent slopes--35 percent
 Okan sandy loam, 2 to 8 percent slopes--30 percent
 Eastwell gravelly sandy loam, 2 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Xeric Torriorthents gravelly sandy loam, 4 to 15 percent slopes--5 percent
 Inclusion 2: Hundraw gravelly sandy loam, 4 to 15 percent slopes--5 percent
 Inclusion 3: Linoyer silt loam, 2 to 4 percent slopes--4 percent
 Inclusion 4: Typic Torriorthents, loamy-skeletal, mixed (calcareous), mesic, shallow gravelly sandy loam, 4 to 15 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Pyrat--Landform: Fan remnants
 Okan--Landform: Inset fans
 Eastwell--Landform: Fan remnants
 Inclusion 1--Landform: Pediments; geomorphic position: backslope

Inclusion 2--Landform: Pediments; geomorphic position: backslope

Inclusion 3--Landform: Inset fans

Inclusion 4--Landform: Pediments; geomorphic position: backslope

Major Component Description

Pyrat Series

Elevation: 6,100 to 6,600 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Okan Series

Elevation: 6,100 to 6,600 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Eastwell Series

Elevation: 6,100 to 6,600 feet

Precipitation: About 8 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface rock fragments: 65 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Pyrat: Indian ricegrass, Wyoming big sagebrush, needleandthread

Okan: Indian ricegrass, Wyoming big sagebrush, needleandthread

Eastwell: Indian ricegrass, black sagebrush, needleandthread

Inclusion 1: Indian ricegrass, black sagebrush, needleandthread

Inclusion 2: Indian ricegrass, black sagebrush, needleandthread

Inclusion 3: Indian ricegrass, winterfat

Inclusion 4: Indian ricegrass, needleandthread, pigmy sagebrush

Ecological Site

Pyrat: 028BY010NV

Okan: 028BY010NV

Eastwell: 028BY011NV

Inclusion 1: 028BY083NV

Inclusion 2: 028BY011NV

Inclusion 3: 028BY013NV

Inclusion 4: 028BY040NV

1002--Threese-Kunzler association

Composition

Major Components

Threese very gravelly loamy coarse sand, 2 to 8 percent slopes--40 percent

Kunzler loam, 0 to 2 percent slopes--25 percent

Threese very gravelly sandy loam, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Xeric Torriorthents silt loam, 2 to 8 percent slopes--7 percent

Inclusion 2: Katelana silt loam, 0 to 4 percent slopes--4 percent

Inclusion 3: Tosser very gravelly sandy loam, 2 to 4 percent slopes--3 percent

Inclusion 4: Linoyer fine sandy loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins

Threese--Landform: Spits

Kunzler--Landform: Barrier beaches

Threese--Landform: Barrier beaches

Inclusion 1--Landform: Barrier beaches

Inclusion 2--Landform: Lagoons

Inclusion 3--Landform: Spits

Inclusion 4--Landform: Fan skirts

Major Component Description

Threese Series

Elevation: 5,600 to 6,400 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly loamy coarse sand

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Kunzler Series

Elevation: 5,600 to 6,400 feet

Precipitation: About 8 inches
 Air temperature: About 48 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from sedimentary rocks

Threese Series

Elevation: 5,600 to 6,400 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Threese: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Kunzler: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail
 Threese: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, winterfat
 Inclusion 2: Black greasewood, bottlebrush squirreltail, shadscale
 Inclusion 3: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 4: Indian ricegrass, winterfat

Ecological Site

Threese: 028BY010NV
 Kunzler: 028BY056NV
 Threese: 028BY010NV
 Inclusion 1: 028BY054NV
 Inclusion 2: 028BY074NV
 Inclusion 3: 028BY016NV
 Inclusion 4: 028BY013NV

1003--Pyrat-Hundraw-Tulase association

Composition

Major Components

Pyrat gravelly sandy loam, 4 to 15 percent slopes--35 percent
 Hundraw gravelly fine sandy loam, 8 to 30 percent slopes--30 percent
 Tulase very fine sandy loam, 2 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Peeko very gravelly silt loam, 4 to 15 percent slopes--10 percent
 Inclusion 2: Hundraw gravelly sandy loam, 8 to 30 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Pyrat--Landform: Fan remnants
 Hundraw--Landform: Pediments; geomorphic position: backslope
 Tulase--Landform: Inset fans
 Inclusion 1--Landform: Fan remnants
 Inclusion 2--Landform: Pediments; geomorphic position: backslope

Major Component Description

Pyrat Series

Elevation: 6,700 to 6,800 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Hundraw Series

Elevation: 6,700 to 6,800 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 25 percent cobbles; 30 percent gravel
 Surface layer texture: Gravelly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from volcanic rocks, loess and volcanic ash

Tulase Series

Elevation: 6,700 to 6,800 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Very fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Pyrat: Indian ricegrass, Wyoming big sagebrush, needleandthread

Hundraw: Indian ricegrass, Utah juniper, black sagebrush, needleandthread

Tulase: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat

Inclusion 1: Indian ricegrass, black sagebrush, needleandthread

Inclusion 2: Indian ricegrass, black sagebrush, needleandthread

Ecological Site

Pyrat: 028BY010NV

Hundraw: 028BY083NV

Tulase: 028BY045NV

Inclusion 1: 028BY011NV

Inclusion 2: 028BY016NV

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Parisa Series

Elevation: 5,600 to 6,500 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 65 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Tulase Series

Elevation: 5,600 to 6,500 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 5 percent gravel

Surface layer texture: Very fine sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Pyrat: Indian ricegrass, Wyoming big sagebrush, needleandthread

Parisa: Indian ricegrass, Wyoming big sagebrush, needleandthread

Tulase: Indian ricegrass, Wyoming big sagebrush,

basin wildrye, thickspike wheatgrass, winterfat

Inclusion 1: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Inclusion 2: Indian ricegrass, black sagebrush, needleandthread

Inclusion 3: Basin wildrye, big sagebrush, black greasewood

Inclusion 4: Indian ricegrass, winterfat

Ecological Site

Pyrat: 028BY010NV

Parisa: 028BY010NV

Tulase: 028BY045NV

Inclusion 1: 028BY052NV

Inclusion 2: 028BY011NV

Inclusion 3: 028BY028NV

Inclusion 4: 028BY084NV

1004--Pyrat-Parisa-Tulase association***Composition*****Major Components**

Pyrat gravelly sandy loam, 2 to 8 percent slopes--45 percent

Parisa gravelly loam, 2 to 8 percent slopes--25 percent

Tulase very fine sandy loam, 2 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Okan sandy loam, 2 to 8 percent slopes--6 percent

Inclusion 2: Palino gravelly loam, 4 to 15 percent slopes--5 percent

Inclusion 3: Kunzler loam, 2 to 4 percent slopes--2 percent

Inclusion 4: Heist sandy loam, 2 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Pyrat--Landform: Fan remnants

Parisa--Landform: Fan remnants

Tulase--Landform: Inset fans

Inclusion 1--Landform: Inset fans

Inclusion 2--Landform: Fan remnants

Inclusion 3--Landform: Fan skirts

Inclusion 4--Landform: Fan skirts

Major Component Description**Pyrat Series**

Elevation: 5,600 to 6,500 feet

Precipitation: About 8 inches

1005--Pyrat-Zerk-Parisa association***Composition*****Major Components**

- Pyrat gravelly sandy loam, 2 to 8 percent slopes--40 percent
- Zerk gravelly fine sandy loam, 2 to 8 percent slopes--30 percent
- Parisa gravelly loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

- Inclusion 1: Loray gravelly sandy loam, 2 to 4 percent slopes--6 percent
- Inclusion 2: Okan sandy loam, 2 to 4 percent slopes--4 percent
- Inclusion 3: Kunzler loam, 0 to 4 percent slopes--3 percent
- Inclusion 4: Katelana silt loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins

Pyrat--Landform: Barrier beaches

Zerk--Landform: Spits

Parisa--Landform: Spits

Inclusion 1--Landform: Spits

Inclusion 2--Landform: Drainageways

Inclusion 3--Landform: Barrier beaches; position on slope: lower

Inclusion 4--Landform: Lake plains

Major Component Description**Pyrat Series**

- Elevation: 5,600 to 5,800 feet
- Precipitation: About 8 inches
- Air temperature: About 47 degrees
- Frost-free season: About 110 days
- Surface rock fragments: 20 percent gravel
- Surface layer texture: Gravelly sandy loam
- Drainage class: Well drained
- Dominant parent material: Alluvium derived from mixed rocks

Zerk Series

- Elevation: 5,600 to 5,800 feet
- Precipitation: About 7 inches
- Air temperature: About 47 degrees
- Frost-free season: About 120 days
- Surface rock fragments: 20 percent gravel
- Surface layer texture: Gravelly fine sandy loam
- Drainage class: Well drained
- Dominant parent material: Alluvium derived from mixed rocks

Parisa Series

- Elevation: 5,600 to 5,800 feet
- Precipitation: About 8 inches
- Air temperature: About 47 degrees
- Frost-free season: About 110 days
- Surface rock fragments: 65 percent gravel
- Surface layer texture: Gravelly loam
- Drainage class: Well drained
- Dominant parent material: Alluvium derived from limestone and dolomite

Dominant Present Vegetation

- Pyrat: Indian ricegrass, Wyoming big sagebrush, needleandthread
- Zerk: Indian ricegrass, bud sagebrush, shadscale, winterfat
- Parisa: Indian ricegrass, Wyoming big sagebrush, needleandthread
- Inclusion 1: Indian ricegrass, bud sagebrush, shadscale
- Inclusion 2: Indian ricegrass, Wyoming big sagebrush, spiny hopsage
- Inclusion 3: Basin wildrye, big sagebrush, black greasewood
- Inclusion 4: Black greasewood, bottlebrush squirreltail, shadscale

Ecological Site

- Pyrat: 028BY010NV
- Zerk: 028BY075NV
- Parisa: 028BY010NV
- Inclusion 1: 028BY017NV
- Inclusion 2: 028BY052NV
- Inclusion 3: 028BY028NV
- Inclusion 4: 028BY074NV

1006--Pyrat-Blimo association***Composition*****Major Components**

- Pyrat gravelly sandy loam, 2 to 8 percent slopes--55 percent
- Blimo sandy loam, 2 to 4 percent slopes--30 percent

Contrasting Inclusions

- Inclusion 1: Xerollic Durorthids, loamy-skeletal, mixed, mesic very gravelly loam, 2 to 8 percent slopes--6 percent
- Inclusion 2: Okan sandy loam, 2 to 4 percent slopes--5 percent
- Inclusion 3: Kunzler silt loam, 2 to 4 percent slopes--3 percent

Inclusion 4: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic, shallow gravelly loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins

Pyrat--Landform: Barrier beaches

Blimo--Landform: Barrier beaches

Inclusion 1--Landform: Spits

Inclusion 2--Landform: Drainageways

Inclusion 3--Landform: Barrier beaches

Inclusion 4--Landform: Spits

Major Component Description

Pyrat Series

Elevation: 5,600 to 5,900 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Blimo Series

Elevation: 5,600 to 5,900 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 5 percent gravel

Surface layer texture: Sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Pyrat: Indian ricegrass, Wyoming big sagebrush, needleandthread

Blimo: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 2: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Inclusion 3: Basin wildrye, big sagebrush, black greasewood

Inclusion 4: Indian ricegrass, black sagebrush, needleandthread

Ecological Site

Pyrat: 028BY010NV

Blimo: 028BY010NV

Inclusion 1: 028BY010NV

Inclusion 2: 028BY052NV

Inclusion 3: 028BY028NV

Inclusion 4: 028BY011NV

1007--Pyrat-Parisa-Automal association

Composition

Major Components

Pyrat gravelly sandy loam, 4 to 15 percent slopes--55 percent

Parisa gravelly loam, 4 to 15 percent slopes--15 percent

Automal gravelly silt loam, 4 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Urmafot very gravelly loam, 4 to 15 percent slopes--6 percent

Inclusion 2: Okan gravelly sandy loam, 2 to 8 percent slopes--4 percent

Inclusion 3: Kunzler silt loam, 2 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts

Pyrat--Landform: Fan remnants

Parisa--Landform: Fan remnants

Automal--Landform: Fan remnants

Inclusion 1--Landform: Fan remnants; position on slope: upper

Inclusion 2--Landform: Inset fans

Inclusion 3--Landform: Fan remnants; position on slope: lower

Major Component Description

Pyrat Series

Elevation: 5,700 to 6,400 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Parisa Series

Elevation: 5,700 to 6,400 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 65 percent gravel

Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Automal Series

Elevation: 5,700 to 6,400 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 35 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Dominant Present Vegetation

Pyrat: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Parisa: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Automal: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 3: Basin wildrye, big sagebrush, black greasewood

Ecological Site

Pyrat: 028BY010NV
 Parisa: 028BY010NV
 Automal: 028BY011NV
 Inclusion 1: 028BY006NV
 Inclusion 2: 028BY010NV
 Inclusion 3: 028BY028NV

1009--Pyrat-Tulase-Wintermute associaiton

Composition

Major Components

Pyrat gravelly sandy loam, 2 to 8 percent slopes--35 percent
 Tulase very fine sandy loam, 2 to 8 percent slopes--25 percent
 Wintermute gravelly silt loam, 2 to 8 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Blimo gravelly sandy loam, 2 to 8 percent slopes--5 percent

Inclusion 2: Zerk gravelly loam, 2 to 8 percent slopes--5 percent
 Inclusion 3: Kunzler silt loam, 0 to 4 percent slopes--3 percent
 Inclusion 4: Linoyer silt loam, 0 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Pyrat--Landform: Fan skirts
 Tulase--Landform: Drainageways
 Wintermute--Landform: Fan skirts
 Inclusion 1--Landform: Fan skirts; position on slope: lower
 Inclusion 2--Landform: Fan skirts; position on slope: lower
 Inclusion 3--Landform: Fan skirts; position on slope: lower
 Inclusion 4--Landform: Fan skirts

Major Component Description

Pyrat Series

Elevation: 5,600 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Tulase Series

Elevation: 5,600 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Very fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Wintermute Series

Elevation: 5,600 to 5,800 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Pyrat: Indian ricegrass, Wyoming big sagebrush, needleandthread

Tulase: Indian ricegrass, Wyoming big sagebrush, needleandthread

Wintermute: Indian ricegrass, bud sagebrush, shadscale, winterfat

Inclusion 1: Indian ricegrass, Wyoming big sagebrush, wheatgrass

Inclusion 2: Indian ricegrass, bud sagebrush, shadscale, winterfat

Inclusion 3: Basin wildrye, big sagebrush, black greasewood

Inclusion 4: Indian ricegrass, winterfat

Ecological Site

Pyrat: 028BY010NV

Tulase: 028BY010NV

Wintermute: 028BY075NV

Inclusion 1: 028BY014NV

Inclusion 2: 028BY075NV

Inclusion 3: 028BY028NV

Inclusion 4: 028BY013NV

Inclusion 4--Landform: Inset fans

Major Component Description***Okan Series***

Elevation: 5,800 to 6,600 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Eastwell Series

Elevation: 5,800 to 6,600 feet

Precipitation: About 8 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface rock fragments: 65 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Blimo Series

Elevation: 5,800 to 6,600 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 5 percent gravel

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Okan: Indian ricegrass, Wyoming big sagebrush, needleandthread

Eastwell: Indian ricegrass, black sagebrush, needleandthread

Blimo: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 1: Indian ricegrass, black sagebrush, needleandthread

Inclusion 2: Indian ricegrass, Indian ricegrass, Utah juniper, black sagebrush, needleandthread

Inclusion 3: Indian ricegrass, winterfat

Inclusion 4: Indian ricegrass, sickle saltbush, western wheatgrass

Ecological Site

Okan: 028BY010NV

1020--Okan-Eastwell-Blimo association***Composition*****Major Components**

Okan sandy loam, 2 to 8 percent slopes--50 percent

Eastwell gravelly sandy loam, 2 to 8 percent slopes--20 percent

Blimo silt loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Hundraw sandy loam, 2 to 8 percent slopes--5 percent

Inclusion 2: Hundraw sandy loam, 4 to 15 percent slopes--5 percent

Inclusion 3: Linoyer silt loam, 2 to 4 percent slopes--3 percent

Inclusion 4: Toano silt loam, 0 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Okan--Landform: Inset fans

Eastwell--Landform: Fan remnants

Blimo--Landform: Fan skirts

Inclusion 1--Landform: Pediments; geomorphic position: backslope

Inclusion 2--Landform: Pediments; geomorphic position: backslope

Inclusion 3--Landform: Inset fans

Eastwell: 028BY011NV
 Blimo: 028BY010NV
 Inclusion 1: 028BY011NV
 Inclusion 2: 028BY083NV
 Inclusion 3: 028BY013NV
 Inclusion 4: 028BY047NV

1023--Okan-Katelana association

Composition

Major Components

Okan sandy loam, dry, 0 to 4 percent slopes--40 percent
 Okan sandy loam, 0 to 4 percent slopes--25 percent
 Katelana silt loam, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Pyrat gravelly sandy loam, 0 to 4 percent slopes--6 percent
 Inclusion 2: Xerollic Durorthids, coarse-loamy, mixed, mesic gravelly sandy loam, 0 to 4 percent slopes--4 percent
 Inclusion 3: Mazuma silt loam, 0 to 2 percent slopes--3 percent
 Inclusion 4: Wintermute gravelly silt loam, 0 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
 Okan--Landform: Barrier beaches
 Okan--Landform: Barrier beaches
 Katelana--Landform: Lake plains
 Inclusion 1--Landform: Barrier beaches
 Inclusion 2--Landform: Spits
 Inclusion 3--Landform: Lagoons
 Inclusion 4--Landform: Barrier beaches

Major Component Description

Okan Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Okan Series

Elevation: 5,600 to 6,000 feet

Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Katelana Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite over lacustrine sediments

Dominant Present Vegetation

Okan: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Okan: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Katelana: Bottlebrush squirreltail, shadscale
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 3: Black greasewood, bottlebrush squirreltail, shadscale
 Inclusion 4: Indian ricegrass, bud sagebrush, shadscale, winterfat

Ecological Site

Okan: 028BY080NV
 Okan: 028BY010NV
 Katelana: 028BY073NV
 Inclusion 1: 028BY010NV
 Inclusion 2: 028BY010NV
 Inclusion 3: 028BY074NV
 Inclusion 4: 028BY075NV

1030--Segura-Bullump-Hutchley association

Composition

Major Components

Segura very stony sandy clay loam, 15 to 50 percent slopes--40 percent
 Bullump very gravelly loam, 15 to 50 percent slopes--25 percent
 Hutchley very gravelly loam, 15 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Lithic Haploxerolls, loamy-skeletal, mixed, frigid gravelly loam, 15 to 50 percent slopes--5 percent
 Inclusion 2: Chen very gravelly sandy loam, 30 to 75 percent slopes--5 percent
 Inclusion 3: Rock outcrop--4 percent
 Inclusion 4: Pachic Haploxerolls, loamy-skeletal, mixed, frigid gravelly loam, 15 to 50 percent slopes--1 percent

Map Unit Setting

Landscape position: Mountains

Segura--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Bullump--Landform: Mountains; geomorphic position: backslope; shape of slope: concave

Hutchley--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: upper

Inclusion 2--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Inclusion 3--Landform: Mountains; geomorphic position: summit

Inclusion 4--Landform: Mountains; geomorphic position: backslope; position on slope: upper; shape of slope: concave

Major Component Description**Segura Series**

Elevation: 7,500 to 8,800 feet

Precipitation: About 14 inches

Air temperature: About 45 degrees

Frost-free season: About 90 days

Surface rock fragments: 5 percent cobbles; 20 percent gravel

Surface layer texture: Very stony sandy clay loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks

Bullump Series

Elevation: 7,500 to 8,800 feet

Precipitation: About 16 inches

Air temperature: About 42 degrees

Frost-free season: About 80 days

Surface rock fragments: 20 percent cobbles

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Colluvium derived from volcanic rocks

Hutchley Series

Elevation: 7,500 to 8,800 feet

Precipitation: About 14 inches

Air temperature: About 43 degrees

Frost-free season: About 65 days

Surface rock fragments: 10 percent cobbles; 5 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Segura: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Bullump: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush, needlegrass

Hutchley: Thurber needlegrass, bluebunch wheatgrass, low sagebrush

Inclusion 1: Bluebunch wheatgrass, curleaf mountainmahogany, mountain big sagebrush

Inclusion 2: Thurber needlegrass, bluebunch wheatgrass, low sagebrush

Inclusion 3: None

Inclusion 4: Letterman needlegrass, lupine, slenderbush eriogonum

Ecological Site

Segura: 028BY046NV

Bullump: 028BY015NV

Hutchley: 028BY034NV

Inclusion 1: 028BY043NV

Inclusion 2: 028BY037NV

Inclusion 3: None

Inclusion 4: 028BY051NV

1040--Segura-Pioche-Chen association**Composition****Major Components**

Segura very cobbly loam, 8 to 30 percent slopes--45 percent

Pioche very gravelly sandy loam, 8 to 30 percent slopes--25 percent

Chen very gravelly loam, 8 to 30 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Lithic Argixerolls, loamy-skeletal, mixed, frigid gravelly loam, 15 to 50 percent slopes--6 percent

Inclusion 2: Pachic Haploxerolls, loamy-skeletal, mixed, frigid loam, 2 to 8 percent slopes--5 percent

Inclusion 3: Lithic Argixerolls, loamy-skeletal, mixed, frigid very gravelly sandy loam, 8 to 30 percent slopes--2 percent

Inclusion 4: Pachic Argixerolls, loamy-skeletal, mixed, frigid gravelly sandy loam, 8 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains

Segura--Landform: Mountains; geomorphic position: backslope; shape of slope: convex

Pioche--Landform: Mountains; geomorphic position: backslope; shape of slope: convex

Chen--Landform: Mountains; geomorphic position: backslope

Inclusion 1--Landform: Mountains; geomorphic position: backslope; aspect: north

Inclusion 2--Landform: Drainageways

Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: upper; shape of slope: convex

Inclusion 4--Landform: Mountains; geomorphic position: backslope; shape of slope: concave

Major Component Description**Segura Series**

Elevation: 6,800 to 7,500 feet

Precipitation: About 14 inches

Air temperature: About 45 degrees

Frost-free season: About 90 days

Surface rock fragments: 5 percent cobbles; 20 percent gravel

Surface layer texture: Very cobbly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks

Pioche Series

Elevation: 6,800 to 7,500 feet

Precipitation: About 12 inches

Air temperature: About 47 degrees

Frost-free season: About 100 days

Surface rock fragments: 10 percent cobbles; 40 percent gravel

Surface layer texture: Very gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Residuum derived from volcanic rocks

Chen Series

Elevation: 6,800 to 7,400 feet

Precipitation: About 12 inches

Air temperature: About 43 degrees

Frost-free season: About 85 days

Surface rock fragments: 15 percent cobbles; 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Segura: Thurber needlegrass, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Pioche: Utah juniper, bluebunch wheatgrass, mountain big sagebrush, singleleaf pinyon

Chen: Thurber needlegrass, bluebunch wheatgrass, low sagebrush

Inclusion 1: Utah juniper, bluebunch wheatgrass, low sagebrush, singleleaf pinyon

Inclusion 2: Utah serviceberry, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Inclusion 3: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Inclusion 4: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush, needlegrass

Ecological Site

Segura: 028BY087NV

Pioche: 028BY062NV

Chen: 028BY037NV

Inclusion 1: 028BY064NV

Inclusion 2: 028BY026NV

Inclusion 3: 028BY046NV

Inclusion 4: 028BY015NV

1061--Pioche-Cucamungo-Rock outcrop association**Composition****Major Components**

Pioche very gravelly sandy loam, 15 to 50 percent slopes--45 percent

Cucamungo very gravelly sandy loam, 30 to 75 percent slopes--25 percent

Rock outcrop--15 percent

Contrasting Inclusions

Inclusion 1: Chen very cobbly loam, 4 to 30 percent slopes--5 percent

Inclusion 2: Graley stony loam, 8 to 30 percent slopes--4 percent

Inclusion 3: Rozara very gravelly loamy coarse sand, 30 to 75 percent slopes--3 percent

Inclusion 4: Upatad very cobbly loam, 8 to 30 percent slopes--3 percent

Map Unit Setting

Landscape position: Mountains

Pioche--Landform: Mountains; geomorphic position: backslope; aspect: south

Cucamungo--Landform: Mountains; geomorphic position: backslope

Rock outcrop--Landform: Mountains

Inclusion 1--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: upper

Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: north

Inclusion 4--Landform: Mountains; geomorphic position: backslope; position on slope: lower

Major Component Description

Pioche Series

Elevation: 7,000 to 8,000 feet

Precipitation: About 12 inches

Air temperature: About 47 degrees

Frost-free season: About 100 days

Surface rock fragments: 10 percent cobbles; 40 percent gravel

Surface layer texture: Very gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Residuum derived from volcanic rocks

Cucamungo Series

Elevation: 7,000 to 8,000 feet

Precipitation: About 14 inches

Air temperature: About 44 degrees

Frost-free season: About 90 days

Surface rock fragments: 30 percent cobbles; 20 percent gravel

Surface layer texture: Very gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from granitic rocks

Rock outcrop Miscellaneous Area

Elevation: 7,000 to 8,000 feet

Dominant Present Vegetation

Pioche: Utah juniper, bluebunch wheatgrass, mountain big sagebrush, singleleaf pinyon

Cucamungo: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush, singleleaf pinyon

Rock outcrop: None

Inclusion 1: Thurber needlegrass, bluebunch wheatgrass, low sagebrush

Inclusion 2: Thurber needlegrass, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Inclusion 3: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush

Inclusion 4: Thurber needlegrass, black sagebrush, bluebunch wheatgrass

Ecological Site

Pioche: 028BY062NV

Cucamungo: 025XY061NV

Rock outcrop: None

Inclusion 1: 028BY037NV

Inclusion 2: 028BY087NV

Inclusion 3: 025XY071NV

Inclusion 4: 028BY093NV

1070--Zafod-Automal-Okan association

Composition

Major Components

Zafod gravelly coarse sandy loam, 4 to 15 percent slopes--40 percent

Automal gravelly sandy loam, 4 to 8 percent slopes--30 percent

Okan sandy loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Wesfil gravelly sandy loam, 4 to 15 percent slopes--5 percent

Inclusion 2: Linoyer silt loam, 2 to 8 percent slopes--5 percent

Inclusion 3: Rock outcrop--3 percent

Inclusion 4: Pachic Haploxerolls, loamy-skeletal, mixed, mesic gravelly sandy loam, 4 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Zafod--Landform: Fan remnants

Automal--Landform: Fan remnants

Okan--Landform: Inset fans

Inclusion 1--Landform: Pediments

Inclusion 2--Landform: Fan skirts

Inclusion 3--Landform: Pediments

Inclusion 4--Landform: Fan remnants

Major Component Description

Zafod Series

Elevation: 5,800 to 6,600 feet

Precipitation: About 9 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Gravelly coarse sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from granitic rocks

Automal Series

Elevation: 5,800 to 6,600 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 35 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Okan Series

Elevation: 5,800 to 6,600 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Zafod: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Automal: Indian ricegrass, black sagebrush, needleandthread
 Okan: Indian ricegrass, Wyoming big sagebrush, spiny hopsage
 Inclusion 1: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 2: Indian ricegrass, winterfat
 Inclusion 3: None
 Inclusion 4: Thurber needlegrass, big sagebrush, bluebunch wheatgrass

Ecological Site

Zafod: 028BY010NV
 Automal: 028BY011NV
 Okan: 028BY052NV
 Inclusion 1: 028BY011NV
 Inclusion 2: 028BY013NV
 Inclusion 3: None
 Inclusion 4: 028BY007NV

1080--Cotant-Segura association

Composition

Major Components

Cotant gravelly clay loam, 4 to 15 percent slopes--65 percent
 Segura very cobbly loam, 8 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Lithic Xeric Torriorthents, loamy-skeletal, mixed, nonacid, mesic very gravelly loam, 15 to 50 percent slopes--5 percent
 Inclusion 2: Aridic Argixerolls, fine-loamy, mixed, mesic very gravelly loam, 4 to 15 percent slopes--5 percent
 Inclusion 3: Chen extremely cobbly clay loam, 8 to 30 percent slopes--4 percent
 Inclusion 4: Cumulic Endoaquolls, fine-loamy, mixed, frigid silt loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Mountains

Cotant--Landform: Mountains; geomorphic position: backslope

Segura--Landform: Mountains; geomorphic position: backslope

Inclusion 1--Landform: Mountains; geomorphic position: backslope; aspect: south

Inclusion 2--Landform: Mountains; geomorphic position: backslope; shape of slope: concave

Inclusion 3--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Inclusion 4--Landform: Drainageways

Major Component Description

Cotant Series

Elevation: 7,000 to 7,600 feet
 Precipitation: About 14 inches
 Air temperature: About 42 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 35 percent gravel
 Surface layer texture: Gravelly clay loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Segura Series

Elevation: 7,000 to 7,600 feet
 Precipitation: About 14 inches
 Air temperature: About 45 degrees
 Frost-free season: About 90 days
 Surface rock fragments: 5 percent cobbles; 20 percent gravel
 Surface layer texture: Very cobbly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from tuffaceous rocks

Dominant Present Vegetation

Cotant: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
 Segura: Thurber needlegrass, antelope bitterbrush,

bluebunch wheatgrass, mountain big sagebrush
 Inclusion 1: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon
 Inclusion 2: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush, needlegrass
 Inclusion 3: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
 Inclusion 4: Rush, sedge, tufted hairgrass

Ecological Site

Cotant: 028BY037NV
 Segura: 028BY087NV
 Inclusion 1: 028BY060NV
 Inclusion 2: 028BY015NV
 Inclusion 3: 028BY037NV
 Inclusion 4: 028BY022NV

1111--Parisa gravelly loam, 2 to 8 percent slopes

Composition

Major Components

Parisa gravelly loam, 2 to 8 percent slopes--85 percent

Contrasting Inclusions

Inclusion 1: Palino gravelly loam, 4 to 8 percent slopes--8 percent
 Inclusion 2: Xeric Torriorthents gravelly sandy loam, 2 to 8 percent slopes--7 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Parisa--Landform: Fan remnants
 Inclusion 1--Landform: Fan remnants
 Inclusion 2--Landform: Inset fans

Major Component Description

Parisa Series

Elevation: 6,100 to 6,700 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 65 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Dominant Present Vegetation

Parisa: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, black sagebrush, needleandthread

Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread

Ecological Site

Parisa: 028BY010NV
 Inclusion 1: 028BY011NV
 Inclusion 2: 028BY010NV

1120--Okan-Automal association

Composition

Major Components

Okan sandy loam, 2 to 8 percent slopes--65 percent
 Automal gravelly silt loam, 4 to 15 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Pharo gravelly sandy loam, 4 to 15 percent slopes--5 percent
 Inclusion 2: Durixerollic Camborthids, loamy-skeletal, mixed, mesic gravelly loam, 4 to 15 percent slopes--4 percent
 Inclusion 3: Durixerollic Camborthids, loamy-skeletal, mixed, mesic gravelly sandy loam, 4 to 15 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Okan--Landform: Fan skirts
 Automal--Landform: Fan remnants
 Inclusion 1--Landform: Fan remnants; geomorphic position: summit; position on slope: upper
 Inclusion 2--Landform: Inset fans
 Inclusion 3--Landform: Fan remnants; position on slope: upper

Major Component Description

Okan Series

Elevation: 5,900 to 6,700 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Automal Series

Elevation: 5,900 to 6,700 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days

Surface rock fragments: 35 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Dominant Present Vegetation

Okan: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Automal: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat
 Inclusion 3: Indian ricegrass, Wyoming big sagebrush, needleandthread

Ecological Site

Okan: 028BY010NV
 Automal: 028BY011NV
 Inclusion 1: 028BY006NV
 Inclusion 2: 028BY045NV
 Inclusion 3: 028BY080NV

1150--Adobe-Wardbay-Hauchee association

Composition

Major Components

Adobe very gravelly silt loam, 15 to 30 percent slopes--45 percent
 Wardbay very gravelly loam, 15 to 50 percent slopes--25 percent
 Hauchee very cobbly loam, 30 to 75 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Belsac very gravelly loam, 15 to 50 percent slopes--7 percent
 Inclusion 2: Rock outcrop--5 percent
 Inclusion 3: Halacan very gravelly loam, 4 to 15 percent slopes--2 percent
 Inclusion 4: Pachic Cryoborolls, loamy-skeletal, mixed very gravelly loam, 15 to 50 percent slopes--1 percent

Map Unit Setting

Landscape position: Mountains
 Adobe--Landform: Mountains; geomorphic position: summit
 Wardbay--Landform: Mountains; geomorphic position: backslope; shape of slope: concave
 Hauchee--Landform: Mountains; geomorphic position:

backslope; shape of slope: convex
 Inclusion 1--Landform: Mountains; geomorphic position: backslope; shape of slope: concave
 Inclusion 2--Landform: Mountains; geomorphic position: summit
 Inclusion 3--Landform: Mountains; geomorphic position: summit
 Inclusion 4--Landform: Mountains; geomorphic position: backslope; shape of slope: convex; aspect: north

Major Component Description

Adobe Series

Elevation: 7,800 to 10,080 feet
 Precipitation: About 18 inches
 Air temperature: About 42 degrees
 Frost-free season: About 70 days
 Surface rock fragments: 25 percent cobbles; 60 percent gravel
 Surface layer texture: Very gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Wardbay Series

Elevation: 7,800 to 10,080 feet
 Precipitation: About 18 inches
 Air temperature: About 42 degrees
 Frost-free season: About 80 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Hauchee Series

Elevation: 7,800 to 10,080 feet
 Precipitation: About 16 inches
 Air temperature: About 42 degrees
 Frost-free season: About 50 days
 Surface rock fragments: 20 percent cobbles; 30 percent gravel
 Surface layer texture: Very cobbly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Adobe: Idaho fescue, black sagebrush, low sagebrush
 Wardbay: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush
 Hauchee: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush

Inclusion 1: Idaho fescue, mountain big sagebrush,
mountain brome, snowberry
Inclusion 2: None
Inclusion 3: Black sagebrush, bluebunch wheatgrass
Inclusion 4: Idaho fescue

Ecological Site

Adobe: 025XY024NV
Wardbay: 025XY042NV
Haunchee: 028BY032NV
Inclusion 1: 025XY004NV
Inclusion 2: None
Inclusion 3: 028BY048NV
Inclusion 4: 025XY010NV

1161--Pharo-Bobs-Pookaloo association

Composition

Major Components

Pharo gravelly loam, 4 to 15 percent slopes--40 percent
Bobs gravelly loam, 4 to 15 percent slopes--30 percent
Pookaloo very gravelly loam, 15 to 50 percent slopes--
15 percent

Contrasting Inclusions

Inclusion 1: Pachic Calcixerolls, loamy-skeletal, mixed,
frigid gravelly loam, 4 to 15 percent slopes--5 percent
Inclusion 2: Aridic Calcixerolls, loamy-skeletal,
carbonatic, frigid very gravelly loam, 8 to 30 percent
slopes--5 percent
Inclusion 3: Aridic Calcixerolls, loamy-skeletal,
carbonatic, mesic very gravelly loam, 15 to 50
percent slopes--3 percent
Inclusion 4: Calciorthidic Haploxerolls, fine-loamy,
mixed, mesic silt loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
Pharo--Landform: Fan remnants
Bobs--Landform: Fan remnants
Pookaloo--Landform: Hills
Inclusion 1--Landform: Hills; geomorphic position:
backslope; shape of slope: concave
Inclusion 2--Landform: Hills; geomorphic position:
backslope
Inclusion 3--Landform: Hills; geomorphic position:
backslope
Inclusion 4--Landform: Inset fans

Major Component Description

Pharo Series

Elevation: 6,100 to 7,000 feet
Precipitation: About 12 inches
Air temperature: About 46 degrees

Frost-free season: About 100 days
Surface rock fragments: 40 percent gravel
Surface layer texture: Gravelly loam
Drainage class: Somewhat excessively drained
Dominant parent material: Alluvium derived from limestone
and dolomite

Bobs Series

Elevation: 6,100 to 7,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface rock fragments: 30 percent gravel
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from limestone
and dolomite, loess and volcanic ash

Pookaloo Series

Elevation: 7,000 to 7,700 feet
Precipitation: About 12 inches
Air temperature: About 46 degrees
Frost-free season: About 100 days
Surface rock fragments: 50 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium
derived from limestone and dolomite

Dominant Present Vegetation

Pharo: Indian ricegrass, black sagebrush, bluebunch
wheatgrass
Bobs: Indian ricegrass, big sagebrush, bluebunch
wheatgrass
Pookaloo: Utah juniper, black sagebrush, bluebunch
wheatgrass, singleleaf pinyon
Inclusion 1: Bluebunch wheatgrass, bluegrass,
mountain big sagebrush
Inclusion 2: Utah juniper, bluebunch wheatgrass,
mountain big sagebrush, singleleaf pinyon
Inclusion 3: Indian ricegrass, black sagebrush,
bluebunch wheatgrass
Inclusion 4: Indian ricegrass, Wyoming big sagebrush,
basin wildrye, thickspike wheatgrass, winterfat

Ecological Site

Pharo: 028BY006NV
Bobs: 028BY094NV
Pookaloo: 028BY060NV
Inclusion 1: 028BY088NV
Inclusion 2: 028BY062NV
Inclusion 3: 028BY008NV

Inclusion 4: 028BY045NV

1171--Pyrat-Automal-Gravier association

Composition

Major Components

Pyrat gravelly sandy loam, 2 to 8 percent slopes--50 percent

Automal gravelly loam, 2 to 8 percent slopes--20 percent

Gravier very gravelly sandy loam, 2 to 8 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Pyrat stony sandy loam, 2 to 8 percent slopes--5 percent

Inclusion 2: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic gravelly sandy loam, 2 to 8 percent slopes--5 percent

Inclusion 3: Okan sandy loam, 0 to 4 percent slopes--3 percent

Inclusion 4: Linoyer silt loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins

Pyrat--Landform: Barrier beaches; position on slope: upper

Automal--Landform: Barrier beaches

Gravier--Landform: Barrier beaches; position on slope: lower

Inclusion 1--Landform: Barrier beaches; position on slope: upper

Inclusion 2--Landform: Barrier beaches

Inclusion 3--Landform: Drainageways

Inclusion 4--Landform: Drainageways

Major Component Description

Pyrat Series

Elevation: 5,700 to 5,800 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Automal Series

Elevation: 5,700 to 5,800 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 35 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Gravier Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 6 inches

Air temperature: About 50 degrees

Frost-free season: About 115 days

Surface rock fragments: 45 percent gravel

Surface layer texture: Very gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Pyrat: Indian ricegrass, Wyoming big sagebrush, needleandthread

Automal: Indian ricegrass, black sagebrush, needleandthread

Gravier: Indian ricegrass, winterfat

Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 3: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 4: Indian ricegrass, winterfat

Ecological Site

Pyrat: 028BY010NV

Automal: 028BY011NV

Gravier: 028BY084NV

Inclusion 1: 028BY010NV

Inclusion 2: 028BY080NV

Inclusion 3: 028BY010NV

Inclusion 4: 028BY013NV

1172--Pyrat-Automal, very stony-Automal association

Composition

Major Components

Pyrat very stony sandy loam, 4 to 8 percent slopes--35 percent

Automal very stony sandy loam, 4 to 15 percent slopes--30 percent

Automal gravelly loam, 4 to 8 percent slopes--20 percent

Contrasting Inclusions

- Inclusion 1: Blimo gravelly loam, 2 to 8 percent slopes--6 percent
- Inclusion 2: Urmafot very gravelly loam, 4 to 15 percent slopes--4 percent
- Inclusion 3: Kunzler loam, 2 to 8 percent slopes--3 percent
- Inclusion 4: Duffer silt loam, 2 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins

Pyrat--Landform: Barrier beaches

Automal--Landform: Fan remnants

Automal--Landform: Fan remnants

Inclusion 1--Landform: Fan skirts

Inclusion 2--Landform: Fan remnants

Inclusion 3--Landform: Barrier beaches

Major Component Description**Pyrat Series**

Elevation: 5,700 to 6,200 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 5 percent cobbles; 20 percent gravel

Surface layer texture: Very stony sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Automal Series

Elevation: 5,700 to 6,200 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 5 percent cobbles; 35 percent gravel

Surface layer texture: Very stony sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Automal Series

Elevation: 5,700 to 6,200 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 35 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite

Dominant Present Vegetation

Pyrat: Indian ricegrass, Wyoming big sagebrush, needleandthread

Automal: Indian ricegrass, black sagebrush, needleandthread

Automal: Indian ricegrass, black sagebrush, needleandthread

Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 2: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Inclusion 3: Basin wildrye, big sagebrush, black greasewood

Inclusion 4: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Ecological Site

Pyrat: 028BY010NV

Automal: 028BY011NV

Automal: 028BY011NV

Inclusion 1: 028BY010NV

Inclusion 2: 028BY006NV

Inclusion 3: 028BY028NV

Inclusion 4: 028BY004NV

1173--Pyrat-Automal association**Composition****Major Components**

Pyrat gravelly loam, 2 to 4 percent slopes--50 percent

Automal gravelly silt loam, 2 to 4 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Tulase silt loam, 0 to 2 percent slopes--5 percent

Inclusion 2: Parisa loam, 2 to 4 percent slopes--5 percent

Inclusion 3: Kunzler loam, 2 to 4 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts

Pyrat--Landform: Fan remnants

Automal--Landform: Fan remnants

Inclusion 1--Landform: Inset fans

Inclusion 2--Landform: Fan remnants

Inclusion 3--Landform: Fan skirts

Major Component Description**Pyrat Series**

Elevation: 5,600 to 6,400 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Automal Series

Elevation: 5,600 to 6,400 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 35 percent gravel
 Surface layer texture: Gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite

Dominant Present Vegetation

Pyrat: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Automal: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 3: Basin wildrye, big sagebrush, black greasewood

Ecological Site

Pyrat: 028BY010NV
 Automal: 028BY011NV
 Inclusion 1: 028BY045NV
 Inclusion 2: 028BY010NV
 Inclusion 3: 028BY028NV

1174--Pyrat-Tosser association

Composition

Major Components

Pyrat gravelly sandy loam, 2 to 4 percent slopes--60 percent
 Tosser very gravelly sandy loam, 2 to 8 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Aridic Calcixerolls, loamy-skeletal, mixed, mesic very gravelly loam, 2 to 4 percent slopes--5 percent
 Inclusion 2: Threesee gravelly sandy loam, 2 to 4 percent slopes--5 percent

Inclusion 3: Sheffit fine sandy loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Pyrat--Landform: Fan remnants
 Tosser--Landform: Beach terraces
 Inclusion 1--Landform: Fan skirts
 Inclusion 2--Landform: Beach terraces
 Inclusion 3--Landform: Lake plains

Major Component Description

Pyrat Series

Elevation: 5,600 to 6,400 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Tosser Series

Elevation: 5,600 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 70 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Pyrat: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Tosser: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 1: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 3: Indian ricegrass, bud sagebrush, shadscale, winterfat

Ecological Site

Pyrat: 028BY010NV
 Tosser: 028BY011NV
 Inclusion 1: 028BY007NV
 Inclusion 2: 028BY010NV
 Inclusion 3: 028BY075NV

1180--Haunchee-Cavehill association***Composition*****Major Components**

Haunchee very cobbly loam, 15 to 50 percent slopes--50 percent
 Cavehill cobbly loam, 15 to 50 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Hardzem cobbly loam, 15 to 50 percent slopes--7 percent
 Inclusion 2: Halacan very gravelly loam, 8 to 30 percent slopes--3 percent
 Inclusion 3: Wardbay very gravelly silt loam, 15 to 50 percent slopes--3 percent
 Inclusion 4: Haunchee very cobbly loam, 15 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains

Haunchee--Landform: Mountains; geomorphic position: backslope; shape of slope: convex

Cavehill--Landform: Mountains; geomorphic position: backslope; shape of slope: concave

Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: north

Inclusion 2--Landform: Mountains; geomorphic position: summit

Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: upper; shape of slope: concave

Inclusion 4--Landform: Mountains; geomorphic position: backslope; shape of slope: convex

Major Component Description**Haunchee Series**

Elevation: 7,000 to 9,100 feet

Precipitation: About 16 inches

Air temperature: About 42 degrees

Frost-free season: About 50 days

Surface rock fragments: 30 percent cobbles; 20 percent gravel

Surface layer texture: Very cobbly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Cavehill Series

Elevation: 7,000 to 9,100 feet

Precipitation: About 14 inches

Air temperature: About 44 degrees

Frost-free season: About 80 days

Surface rock fragments: 5 percent cobbles; 20 percent gravel

Surface layer texture: Cobbly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Haunchee: Bluebunch wheatgrass, curleaf mountainmahogany, mountain big sagebrush

Cavehill: Bluebunch wheatgrass, curleaf mountainmahogany, mountain big sagebrush, singleleaf pinyon

Inclusion 1: Bluebunch wheatgrass, limber pine, mountain big sagebrush, white fir

Inclusion 2: Black sagebrush, bluebunch wheatgrass

Inclusion 3: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush

Inclusion 4: Bluebunch wheatgrass, curleaf mountainmahogany, mountain big sagebrush

Ecological Site

Haunchee: 025XY071NV

Cavehill: 025XY061NV

Inclusion 1: 028BY063NV

Inclusion 2: 028BY048NV

Inclusion 3: 025XY042NV

Inclusion 4: 028BY032NV

1181--Haunchee-Halacan-Wardbay association***Composition*****Major Components**

Haunchee very gravelly loam, 15 to 50 percent slopes--35 percent

Halacan very gravelly loam, 8 to 30 percent slopes--30 percent

Wardbay very gravelly loam, 15 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Hardzem gravelly silt loam, 30 to 75 percent slopes--5 percent

Inclusion 2: Rock outcrop--5 percent

Inclusion 3: Pachic Cryoborolls, coarse-loamy, mixed, mesic gravelly loam, 15 to 50 percent slopes--3 percent

Inclusion 4: Pachic Cryoborolls, loamy-skeletal, mixed very gravelly loam, 15 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains

Haunchee--Landform: Mountains; geomorphic position: backslope; shape of slope: convex

Halacan--Landform: Mountains; geomorphic position: summit

Wardbay--Landform: Mountains; geomorphic position: backslope; shape of slope: concave

Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: north

Inclusion 2--Landform: Mountains; geomorphic position: summit

Inclusion 3--Landform: Mountains; geomorphic position: backslope; shape of slope: convex; aspect: north

Inclusion 4--Landform: Mountains; geomorphic position: backslope

Major Component Description

Haunchee Series

Elevation: 6,800 to 9,200 feet

Precipitation: About 16 inches

Air temperature: About 42 degrees

Frost-free season: About 50 days

Surface rock fragments: 5 percent cobbles; 50 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Halacan Series

Elevation: 6,800 to 9,200 feet

Precipitation: About 16 inches

Air temperature: About 40 degrees

Frost-free season: About 50 days

Surface rock fragments: 10 percent cobbles; 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Wardbay Series

Elevation: 6,800 to 9,200 feet

Precipitation: About 18 inches

Air temperature: About 42 degrees

Frost-free season: About 80 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Haunchee: Bluebunch wheatgrass, curleaf

mountainmahogany, mountain big sagebrush

Halacan: Black sagebrush, bluebunch wheatgrass

Wardbay: Mountain big sagebrush

Inclusion 1: Bluebunch wheatgrass, limber pine, mountain big sagebrush, white fir

Inclusion 2: None

Inclusion 3: Idaho fescue, mountain big sagebrush, mountain brome, snowberry

Inclusion 4: Idaho fescue

Ecological Site

Haunchee: 028BY043NV

Halacan: 028BY048NV

Wardbay: 025XY012NV

Inclusion 1: 028BY063NV

Inclusion 2: None

Inclusion 3: 025XY004NV

Inclusion 4: 025XY010NV

1190--Upatad-Atlow association

Composition

Major Components

Upatad very gravelly silt loam, 15 to 50 percent slopes--45 percent

Atlow very gravelly loam, 8 to 30 percent slopes--25 percent

Upatad extremely cobbly loam, 15 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Haploxerollic Durargids gravelly loam, 4 to 15 percent slopes--6 percent

Inclusion 2: Segura cobbly loam, 8 to 30 percent slopes--5 percent

Inclusion 3: Rock outcrop--2 percent

Inclusion 4: Xeric Torriorthents gravelly sandy loam, 8 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills

Upatad--Landform: Hills; geomorphic position: backslope; aspect: north

Atlow--Landform: Hills; geomorphic position: summit; aspect: south

Upatad--Landform: Hills; geomorphic position: backslope; aspect: north

Inclusion 1--Landform: Fan remnants

Inclusion 2--Landform: Hills; geomorphic position: summit

Inclusion 3--Landform: Hills; geomorphic position: summit

Inclusion 4--Landform: Hills; geomorphic position: backslope

Major Component Description

Upatad Series

Elevation: 5,200 to 7,600 feet
 Precipitation: About 12 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 80 percent gravel
 Surface layer texture: Very gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from volcanic rocks

Atlow Series

Elevation: 5,200 to 7,600 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent cobbles; 35 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum derived from volcanic rocks

Upatad Series

Elevation: 5,200 to 7,600 feet
 Precipitation: About 12 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 20 percent cobbles; 60 percent gravel
 Surface layer texture: Extremely cobbly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Upatad: Thurber needlegrass, black sagebrush, bluebunch wheatgrass
 Atlow: Indian ricegrass, Thurber needlegrass, black sagebrush
 Upatad: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon
 Inclusion 1: Thurber needlegrass
 Inclusion 2: Thurber needlegrass, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
 Inclusion 3: None
 Inclusion 4: Indian ricegrass, Scribner needlegrass, black sagebrush, littleleaf mountainmahogany

Ecological Site

Upatad: 028BY093NV
 Atlow: 028BY089NV
 Upatad: 028BY060NV
 Inclusion 1: 028BY086NV
 Inclusion 2: 028BY087NV
 Inclusion 3: None
 Inclusion 4: 028BY066NV

1191--Upatad-Pioche-Rock outcrop association

Composition

Major Components

Upatad very gravelly silt loam, 15 to 50 percent slopes--40 percent
 Pioche very gravelly sandy loam, 15 to 50 percent slopes--35 percent
 Rock outcrop--15 percent

Contrasting Inclusions

Inclusion 1: Aridic Argixerolls, loamy-skeletal, mixed, mesic very gravelly loam, 4 to 15 percent slopes--6 percent
 Inclusion 2: Aridic Argixerolls, clayey-skeletal, montmorillonitic, mesic very gravelly loam, 4 to 15 percent slopes--3 percent
 Inclusion 3: Xeric Torriorthents gravelly silt loam, 0 to 4 percent slopes--1 percent

Map Unit Setting

Landscape position: Mountains
 Upatad--Landform: Mountains; geomorphic position: backslope; aspect: south
 Pioche--Landform: Mountains; geomorphic position: backslope; aspect: north
 Rock outcrop--Landform: Mountains
 Inclusion 1--Landform: Fan remnants
 Inclusion 2--Landform: Fan remnants
 Inclusion 3--Landform: Drainageways

Major Component Description

Upatad Series

Elevation: 5,700 to 7,200 feet
 Precipitation: About 12 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 80 percent gravel
 Surface layer texture: Very gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from volcanic rocks

Pioche Series

Elevation: 5,700 to 7,200 feet

Precipitation: About 12 inches

Air temperature: About 47 degrees

Frost-free season: About 100 days

Surface rock fragments: 10 percent cobbles; 40 percent gravel

Surface layer texture: Very gravelly sandy loam

Drainage class: Well drained

Dominant parent material: Residuum derived from volcanic rocks

Rock outcrop Miscellaneous Area

Elevation: 5,700 to 7,200 feet

Dominant Present Vegetation

Upatad: Thurber needlegrass, black sagebrush, bluebunch wheatgrass

Pioche: Utah juniper, bluebunch wheatgrass, mountain big sagebrush, singleleaf pinyon

Rock outcrop: None

Inclusion 1: Thurber needlegrass, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Inclusion 2: Thurber needlegrass, big sagebrush, bluebunch wheatgrass

Inclusion 3: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat

Ecological Site

Upatad: 028BY093NV

Pioche: 028BY062NV

Rock outcrop: None

Inclusion 1: 028BY087NV

Inclusion 2: 028BY007NV

Inclusion 3: 028BY045NV

1200--Hardol-Hardzem-Rock outcrop association***Composition*****Major Components**

Hardol very gravelly silt loam, 15 to 50 percent slopes--35 percent

Hardzem channery loam, 15 to 50 percent slopes--30 percent

Rock outcrop--15 percent

Contrasting Inclusions

Inclusion 1: Cavehill gravelly silt loam, 15 to 50 percent slopes--8 percent

Inclusion 2: Hyzen very gravelly loam, 15 to 50 percent slopes--7 percent

Inclusion 3: Haunchee cobbly loam, 8 to 30 percent slopes--3 percent

Inclusion 4: Halacan extremely gravelly loam, 15 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains

Hardol--Landform: Mountains; geomorphic position: backslope

Hardzem--Landform: Mountains; geomorphic position: backslope; aspect: north

Rock outcrop--Landform: Mountains

Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: north

Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: lower

Inclusion 3--Landform: Mountains; geomorphic position: backslope

Inclusion 4--Landform: Mountains; geomorphic position: summit

Major Component Description**Hardol Series**

Elevation: 7,000 to 9,400 feet

Precipitation: About 20 inches

Air temperature: About 40 degrees

Frost-free season: About 60 days

Surface rock fragments: 10 percent cobbles; 20 percent gravel

Surface layer texture: Very gravelly silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Hardzem Series

Elevation: 7,000 to 9,400 feet

Precipitation: About 25 inches

Air temperature: About 40 degrees

Frost-free season: About 60 days

Surface rock fragments: 25 percent cobbles; 45 percent gravel

Surface layer texture: Channery loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Rock outcrop Miscellaneous Area

Elevation: 7,000 to 9,400 feet

Dominant Present Vegetation

Hardol: Bluebunch wheatgrass, curlleaf

mountainmahogany, mountain big sagebrush

Hardzem: Bluebunch wheatgrass, limber pine, mountain big sagebrush, white fir

Rock outcrop: None

Inclusion 1: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush, singleleaf pinyon

Inclusion 2: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Inclusion 3: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush

Inclusion 4: Black sagebrush, bluebunch wheatgrass

Ecological Site

Hardol: 028BY042NV

Hardzem: 028BY063NV

Rock outcrop: None

Inclusion 1: 028BY058NV

Inclusion 2: 028BY060NV

Inclusion 3: 028BY043NV

Inclusion 4: 028BY048NV

1201--Hardol-Rock outcrop-Wardbay association

Composition

Major Components

Hardol very gravelly silt loam, 30 to 75 percent slopes--40 percent

Rock outcrop--25 percent

Wardbay very gravelly loam, 15 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Haunchee cobbly loam, 15 to 50 percent slopes--5 percent

Inclusion 2: Hardol gravelly silt loam, 15 to 50 percent slopes--5 percent

Inclusion 3: Cavehill gravelly silt loam, 15 to 50 percent slopes--3 percent

Inclusion 4: Halacan extremely gravelly loam, 8 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains

Hardol--Landform: Mountains; geomorphic position: backslope; shape of slope: concave

Rock outcrop--Landform: Mountains

Wardbay--Landform: Mountains; geomorphic position: backslope; shape of slope: convex

Inclusion 1--Landform: Mountains; geomorphic position: backslope

Inclusion 2--Landform: Mountains; geomorphic position: backslope; shape of slope: concave

Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: lower; aspect: north

Inclusion 4--Landform: Mountains; geomorphic position: summit

Major Component Description

Hardol Series

Elevation: 6,600 to 8,800 feet

Precipitation: About 20 inches

Air temperature: About 40 degrees

Frost-free season: About 60 days

Surface rock fragments: 10 percent cobbles; 20 percent gravel

Surface layer texture: Very gravelly silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Rock outcrop Miscellaneous Area

Elevation: 6,600 to 8,800 feet

Wardbay Series

Elevation: 6,600 to 8,800 feet

Precipitation: About 18 inches

Air temperature: About 42 degrees

Frost-free season: About 80 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Hardol: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush

Rock outcrop: None

Wardbay: Bluebunch wheatgrass, mountain big sagebrush

Inclusion 1: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush

Inclusion 2: Bluebunch wheatgrass, limber pine, mountain big sagebrush, white fir

Inclusion 3: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush, singleleaf pinyon

Inclusion 4: Black sagebrush, bluebunch wheatgrass

Ecological Site

Hardol: 028BY042NV

Wardbay: 028BY070NV

Rock outcrop: None

Inclusion 1: 028BY043NV

Inclusion 2: 028BY063NV

Inclusion 3: 028BY058NV

Inclusion 4: 028BY048NV

1210--Blimo-Kunzler-Linoyer association***Composition*****Major Components**

Blimo gravelly loam, 0 to 2 percent slopes--50 percent
 Kunzler loam, 0 to 2 percent slopes--20 percent
 Linoyer silt loam, 0 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Pyrat gravelly sandy loam, 0 to 4 percent slopes--5 percent
 Inclusion 2: Zerk gravelly loam, 2 to 8 percent slopes--5 percent
 Inclusion 3: Kunzler silt loam, 0 to 2 percent slopes--3 percent
 Inclusion 4: Katelana silt loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins

Blimo--Landform: Barrier beaches

Kunzler--Landform: Barrier beaches

Linoyer--Landform: Lagoons

Inclusion 1--Landform: Barrier beaches

Inclusion 2--Landform: Spits

Inclusion 3--Landform: Barrier beaches

Inclusion 4--Landform: Lagoons; position on slope: lower

Major Component Description**Blimo Series**

Elevation: 6,000 to 6,100 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 5 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Kunzler Series

Elevation: 6,000 to 6,100 feet

Precipitation: About 8 inches

Air temperature: About 48 degrees

Frost-free season: About 120 days

Surface rock fragments: 5 percent gravel

Surface layer texture: Loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from sedimentary rocks

Linoyer Series

Elevation: 6,000 to 6,100 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Blimo: Indian ricegrass, Wyoming big sagebrush, wheatgrass

Kunzler: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail

Linoyer: Indian ricegrass, winterfat

Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 2: Indian ricegrass, bud sagebrush, shadscale, winterfat

Inclusion 3: Basin wildrye, big sagebrush, black greasewood

Inclusion 4: Bottlebrush squirreltail, shadscale

Ecological Site

Blimo: 028BY014NV

Kunzler: 028BY056NV

Linoyer: 028BY013NV

Inclusion 1: 028BY010NV

Inclusion 2: 028BY075NV

Inclusion 3: 028BY028NV

Inclusion 4: 028BY073NV

1213--Blimo-Threesee association***Composition*****Major Components**

Blimo sandy loam, 0 to 2 percent slopes--60 percent
 Threesee gravelly loam, 0 to 4 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Mazuma silt loam, 0 to 2 percent slopes--8 percent

Inclusion 2: Tosser gravelly sandy loam, 0 to 4 percent slopes--3 percent

Inclusion 3: Durixerollic Calciorthids, sandy-skeletal, mixed, mesic very gravelly loam, 2 to 4 percent slopes--3 percent

Inclusion 4: Kunzler loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins

Blimo--Landform: Barrier beaches

Threesee--Landform: Barrier beaches

Inclusion 1--Landform: Lagoons
 Inclusion 2--Landform: Spits
 Inclusion 3--Landform: Spits
 Inclusion 4--Landform: Barrier beaches

Major Component Description

Blimo Series

Elevation: 5,700 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Threese Series

Elevation: 5,700 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Blimo: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Threese: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, bottlebrush squirreltail, shadscale
 Inclusion 2: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 3: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 4: Basin wildrye, big sagebrush, black greasewood

Ecological Site

Blimo: 028BY010NV
 Threese: 028BY010NV
 Inclusion 1: 028BY009NV
 Inclusion 2: 028BY016NV
 Inclusion 3: 028BY080NV
 Inclusion 4: 028BY028NV

1215--Blimo-Zorravista association

Composition

Major Components

Blimo sandy loam, 2 to 8 percent slopes--70 percent
 Zorravista loamy fine sand, 4 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Durixerollic Camborthids, coarse-loamy, mixed, mesic sandy loam, 2 to 8 percent slopes--10 percent
 Inclusion 2: Tosser gravelly loam, 2 to 8 percent slopes--3 percent
 Inclusion 3: Katelana silt loam, 0 to 2 percent slopes--1 percent
 Inclusion 4: Okan sandy loam, 2 to 4 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
 Blimo--Landform: Barrier beaches
 Zorravista--Landform: Dunes
 Inclusion 1--Landform: Barrier beaches
 Inclusion 2--Landform: Spits
 Inclusion 3--Landform: Lagoons
 Inclusion 4--Landform: Barrier beaches

Major Component Description

Blimo Series

Elevation: 5,700 to 5,900 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Zorravista Series

Elevation: 5,700 to 5,900 feet
 Precipitation: About 8 inches
 Air temperature: About 48 degrees
 Frost-free season: About 115 days
 Surface layer texture: Loamy fine sand
 Drainage class: Excessively drained
 Dominant parent material: Eolian material

Dominant Present Vegetation

Blimo: Indian ricegrass, Wyoming big sagebrush, needleandthread

Zorravista: Indian ricegrass, big sagebrush, thickspike wheatgrass

Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 2: Indian ricegrass, black sagebrush, needleandthread

Inclusion 3: Bottlebrush squirreltail, shadscale

Inclusion 4: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Ecological Site

Blimo: 028BY010NV

Zorravista: 028BY068NV

Inclusion 1: 028BY010NV

Inclusion 2: 028BY016NV

Inclusion 3: 028BY073NV

Inclusion 4: 028BY052NV

1216--Blimo-Idway-Mazuma association***Composition*****Major Components**

Blimo sandy loam, 0 to 2 percent slopes--35 percent

Idway sandy loam, 0 to 2 percent slopes--30 percent

Mazuma silt loam, 0 to 2 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Threese loam, 2 to 4 percent slopes--4 percent

Inclusion 2: Toano silt loam, 0 to 2 percent slopes--2 percent

Inclusion 3: Kunzler loam, 0 to 2 percent slopes--2 percent

Inclusion 4: Kunzler loam, 2 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins

Blimo--Landform: Barrier beaches

Idway--Landform: Barrier beaches

Mazuma--Landform: Barrier beaches

Inclusion 1--Landform: Spits

Inclusion 2--Landform: Fan aprons

Inclusion 3--Landform: Barrier beaches

Inclusion 4--Landform: Barrier beaches

Major Component Description**Blimo Series**

Elevation: 5,600 to 5,800 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 5 percent gravel

Surface layer texture: Sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Idway Series

Elevation: 5,600 to 5,800 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 25 percent gravel

Surface layer texture: Sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Mazuma Series

Elevation: 5,600 to 5,800 feet

Precipitation: About 6 inches

Air temperature: About 50 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Dominant Present Vegetation

Blimo: Indian ricegrass, Wyoming big sagebrush, needleandthread

Idway: Indian ricegrass, Wyoming big sagebrush, needleandthread

Mazuma: Bottlebrush squirreltail, shadscale

Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 2: Indian ricegrass, sickle saltbush, western wheatgrass

Inclusion 3: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail

Inclusion 4: Basin wildrye, big sagebrush, black greasewood

Ecological Site

Blimo: 028BY010NV

Idway: 028BY010NV

Mazuma: 028BY073NV

Inclusion 1: 028BY010NV

Inclusion 2: 028BY047NV

Inclusion 3: 028BY056NV

Inclusion 4: 028BY028NV

1220--Onkeyo-Adobe-Pookaloo association

Composition

Major Components

Onkeyo very gravelly silt loam, 15 to 50 percent slopes--40 percent
 Adobe very gravelly silt loam, 15 to 30 percent slopes--30 percent
 Pookaloo very gravelly loam, 15 to 50 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Tecomar very gravelly silt loam, 15 to 50 percent slopes--5 percent
 Inclusion 2: Haunchee gravelly loam, 8 to 30 percent slopes--5 percent
 Inclusion 3: Bobs gravelly loam, 4 to 15 percent slopes--5 percent

Map Unit Setting

Landscape position: Mountains

Onkeyo--Landform: Mountains; geomorphic position: backslope; aspect: north

Adobe--Landform: Mountains; geomorphic position: summit; position on slope: upper

Pookaloo--Landform: Mountains; geomorphic position: backslope; position on slope: lower

Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: lower

Inclusion 2--Landform: Mountains; geomorphic position: summit

Inclusion 3--Landform: Fan remnants

Major Component Description

Onkeyo Series

Elevation: 6,900 to 8,300 feet
 Precipitation: About 14 inches
 Air temperature: About 44 degrees
 Frost-free season: About 90 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly silt loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Adobe Series

Elevation: 7,800 to 8,300 feet
 Precipitation: About 18 inches
 Air temperature: About 42 degrees
 Frost-free season: About 70 days

Surface rock fragments: 25 percent cobbles; 60 percent gravel

Surface layer texture: Very gravelly silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Pookaloo Series

Elevation: 6,900 to 7,800 feet

Precipitation: About 12 inches

Air temperature: About 46 degrees

Frost-free season: About 100 days

Surface rock fragments: 50 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Onkeyo: Indian ricegrass, bluebunch wheatgrass, mountain big sagebrush

Adobe: Black sagebrush, bluebunch wheatgrass

Pookaloo: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Inclusion 1: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Inclusion 2: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush

Inclusion 3: Indian ricegrass, big sagebrush, bluebunch wheatgrass

Ecological Site

Onkeyo: 028BY079NV

Adobe: 028BY027NV

Pookaloo: 028BY060NV

Inclusion 1: 028BY008NV

Inclusion 2: 028BY043NV

Inclusion 3: 028BY094NV

1230--Hardzem-Haunchee-Wardbay association

Composition

Major Components

Hardzem very stony loam, 30 to 75 percent slopes--50 percent
 Haunchee very gravelly loam, 30 to 75 percent slopes--20 percent
 Wardbay very gravelly loam, 30 to 75 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--6 percent

Inclusion 2: Pachic Cryoborolls, loamy-skeletal, mixed very gravelly loam, 30 to 75 percent slopes--5 percent
 Inclusion 3: Belsac very gravelly loam, 15 to 50 percent slopes--3 percent
 Inclusion 4: Entic Cryumbrepts, fine-loamy, mixed gravelly loam, 30 to 50 percent slopes--1 percent

Map Unit Setting

Landscape position: Mountains

Hardzem--Landform: Mountains; geomorphic position: backslope; aspect: north

Haunchee--Landform: Mountains; geomorphic position: backslope

Wardbay--Landform: Mountains; geomorphic position: backslope; aspect: north

Inclusion 1--Landform: Mountains; geomorphic position: summit

Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: north

Inclusion 3--Landform: Mountains; geomorphic position: backslope; shape of slope: concave

Inclusion 4--Landform: Mountains; geomorphic position: backslope; position on slope: upper; shape of slope: concave

Major Component Description

Hardzem Series

Elevation: 7,800 to 10,260 feet

Precipitation: About 25 inches

Air temperature: About 40 degrees

Frost-free season: About 60 days

Surface rock fragments: 5 percent stones and boulders; 25 percent cobbles; 45 percent gravel

Surface layer texture: Very stony loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Haunchee Series

Elevation: 7,800 to 10,260 feet

Precipitation: About 16 inches

Air temperature: About 42 degrees

Frost-free season: About 50 days

Surface rock fragments: 5 percent cobbles; 50 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Wardbay Series

Elevation: 7,800 to 10,260 feet

Precipitation: About 18 inches

Air temperature: About 42 degrees

Frost-free season: About 80 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Hardzem: Bluebunch wheatgrass, limber pine, mountain big sagebrush, white fir

Haunchee: Bluebunch wheatgrass, curleaf mountainmahogany, mountain big sagebrush

Wardbay: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush

Inclusion 1: None

Inclusion 2: Idaho fescue

Inclusion 3: Idaho fescue, mountain big sagebrush, mountain brome, snowberry

Inclusion 4: Letterman needlegrass, tailcup lupine

Ecological Site

Hardzem: 028BY063NV

Haunchee: 028BY032NV

Wardbay: 025XY042NV

Inclusion 1: None

Inclusion 2: 025XY010NV

Inclusion 3: 025XY004NV

Inclusion 4: 025XY028NV

1240--Benin association

Composition

Major Components

Benin silty clay loam, 0 to 2 percent slopes--65 percent

Benin silt loam, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Katelana silt loam, 0 to 2 percent slopes--5 percent

Inclusion 2: Benin silt loam, 0 to 2 percent slopes--5 percent

Inclusion 3: Ragtown silt loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins

Benin--Landform: Lake plains

Benin--Landform: Lake plains

Inclusion 1--Landform: Lake plains

Inclusion 2--Landform: Lake plains

Inclusion 3--Landform: Lake plains

Major Component Description

Benin Series

Elevation: 5,585 to 5,600 feet

Precipitation: About 7 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface layer texture: Silty clay loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Benin Series

Elevation: 5,585 to 5,600 feet

Precipitation: About 7 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

Benin: Alkali sacaton, black greasewood, inland saltgrass

Benin: Alkali sacaton, black greasewood, inland saltgrass

Inclusion 1: Black greasewood, bottlebrush squirreltail, shadscale

Inclusion 2: Indian ricegrass, sickle saltbush, western wheatgrass

Inclusion 3: Black greasewood, bottlebrush squirreltail, sickle saltbush

Ecological Site

Benin: 028BY020NV

Benin: 028BY020NV

Inclusion 1: 028BY074NV

Inclusion 2: 028BY047NV

Inclusion 3: 028BY097NV

1241--Benin, moist-Playas-Benin association

Composition

Major Components

Benin silty clay loam, 0 to 2 percent slopes--55 percent

Playas silty clay loam, 0 to 1 percent slopes--15 percent

Benin silt loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Aerice Halaquepts, fine, montmorillonitic (calcareous), mesic silty clay loam, 0 to 2 percent slopes--4 percent

Inclusion 2: Kawich fine sand, 4 to 30 percent slopes--4 percent

Inclusion 3: Aquic Torriorthents, fine, montmorillonitic (calcareous), mesic silt loam, 0 to 2 percent slopes--4 percent

Inclusion 4: Katelana silt loam, 0 to 2 percent slopes--3 percent

Map Unit Setting

Landscape position: Intermontane basins

Benin--Landform: Lake plains

Playas--Landform: Flood-plain playas

Benin--Landform: Lake plains

Inclusion 1--Landform: Lake plains

Inclusion 2--Landform: Dunes

Inclusion 3--Landform: Lake plains

Inclusion 4--Landform: Lake plains

Major Component Description

Benin Series

Elevation: 5,600 to 6,000 feet

Precipitation: About 7 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface layer texture: Silty clay loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Playas Miscellaneous Area

Elevation: 5,600 to 6,000 feet

Surface layer texture: Silty clay loam

Drainage class: Very poorly drained

Benin Series

Elevation: 5,600 to 6,000 feet

Precipitation: About 7 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

Benin: Basin wildrye, black greasewood, inland saltgrass

Playas: None

Benin: Alkali sacaton, black greasewood, inland saltgrass

Inclusion 1: Bluegrass, rush, sedge

Inclusion 2: Indian ricegrass, black greasewood, shadscale, thickspike wheatgrass

Inclusion 3: Inland saltgrass

Inclusion 4: Black greasewood, bottlebrush squirreltail, shadscale

Ecological Site

Benin: 028BY069NV

Benin: 028BY020NV

Playas: None

Inclusion 1: 028BY001NV

Inclusion 2: 028BY021NV

Inclusion 3: 028BY050NV

Inclusion 4: 028BY074NV

1250--Tecomar-Pookaloo association

Composition

Major Components

Tecomar extremely gravelly loam, 15 to 50 percent slopes--65 percent

Pookaloo very gravelly loam, 15 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Typic Haploxerolls, coarse-loamy, mixed, mesic gravelly sandy loam, 4 to 15 percent slopes--8 percent

Inclusion 2: Typic Argixerolls, fine-loamy, mixed, frigid gravelly loam, 15 to 50 percent slopes--3 percent

Inclusion 3: Cavehill very stony silt loam, 15 to 50 percent slopes--2 percent

Inclusion 4: Rock outcrop--2 percent

Map Unit Setting

Landscape position: Mountains

Tecomar--Landform: Mountains; geomorphic position: summit

Pookaloo--Landform: Mountains; geomorphic position: backslope

Inclusion 1--Landform: Drainageways

Inclusion 2--Landform: Mountains; geomorphic position: backslope

Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: north

Inclusion 4--Landform: Mountains; geomorphic position: summit

Major Component Description

Tecomar Series

Elevation: 5,400 to 7,700 feet

Precipitation: About 12 inches

Air temperature: About 46 degrees

Frost-free season: About 100 days

Surface rock fragments: 5 percent cobbles; 60 percent gravel

Surface layer texture: Extremely gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Pookaloo Series

Elevation: 5,400 to 7,700 feet

Precipitation: About 12 inches

Air temperature: About 46 degrees

Frost-free season: About 100 days

Surface rock fragments: 50 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Tecomar: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Pookaloo: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Inclusion 1: Basin wildrye, big sagebrush, bluegrass, thickspike wheatgrass

Inclusion 2: Bluebunch wheatgrass, bluegrass, mountain big sagebrush

Inclusion 3: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush, singleleaf pinyon

Inclusion 4: None

Ecological Site

Tecomar: 028BY008NV

Pookaloo: 028BY060NV

Inclusion 1: 028BY082NV

Inclusion 2: 028BY088NV

Inclusion 3: 028BY058NV

Inclusion 4: None

1270--Katelana-Sheffit association***Composition*****Major Components**

Katelana silt loam, 0 to 2 percent slopes--65 percent
 Sheffit silt loam, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Duffer silt loam, 0 to 2 percent slopes--7 percent
 Inclusion 2: Kunzler loam, 0 to 2 percent slopes--5 percent
 Inclusion 3: Sycomat loam, 0 to 2 percent slopes--2 percent
 Inclusion 4: Playas, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
 Katelana--Landform: Lake plains
 Sheffit--Landform: Lake plains
 Inclusion 1--Landform: Alluvial flats
 Inclusion 2--Landform: Lake plains
 Inclusion 3--Landform: Lake plains
 Inclusion 4--Landform: Fan remnants

Major Component Description**Katelana Series**

Elevation: 5,600 to 6,100 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from limestone and dolomite over lacustrine sediments

Sheffit Series

Elevation: 5,600 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Moderately well drained
 Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

Katelana: Black greasewood, bottlebrush squirreltail, shadscale
 Sheffit: Basin wildrye, big sagebrush, black greasewood
 Inclusion 1: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Inclusion 2: Basin wildrye, big sagebrush, black greasewood
 Inclusion 3: Black greasewood, bottlebrush squirreltail, shadscale
 Inclusion 4: None

Ecological Site

Katelana: 028BY074NV
 Sheffit: 028BY028NV
 Inclusion 1: 028BY004NV
 Inclusion 2: 028BY028NV
 Inclusion 3: 028BY074NV
 Inclusion 4: None

1271--Uvada-Ragtown association***Composition*****Major Components**

Uvada silty clay loam, 0 to 2 percent slopes--55 percent
 Ragtown silty clay loam, 0 to 2 percent slopes--30 percent

Contrasting Inclusions

Inclusion 1: Sheffit silt loam, 0 to 2 percent slopes--6 percent
 Inclusion 2: Ragtown silt loam, 0 to 2 percent slopes--5 percent
 Inclusion 3: Kawich fine sand, 4 to 15 percent slopes--3 percent
 Inclusion 4: Benin silty clay, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
 Uvada--Landform: Lake plains
 Ragtown--Landform: Lake plains
 Inclusion 1--Landform: Lake plains
 Inclusion 2--Landform: Lake plains
 Inclusion 3--Landform: Dunes
 Inclusion 4--Landform: Lake plains

Major Component Description**Uvada Series**

Elevation: 5,600 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay loam
 Drainage class: Well drained
 Dominant parent material: Lacustrine sediments derived from volcanic rocks

Ragtown Series

Elevation: 5,600 to 6,000 feet

Precipitation: About 6 inches

Air temperature: About 51 degrees

Frost-free season: About 120 days

Surface layer texture: Silty clay loam

Drainage class: Moderately well drained

Dominant parent material: Lacustrine sediments derived from volcanic rocks

Dominant Present Vegetation

Uvada: Black greasewood, bottlebrush squirreltail, shadscale

Ragtown: Black greasewood, bottlebrush squirreltail, sickle saltbush

Inclusion 1: Basin wildrye, big sagebrush, black greasewood

Inclusion 2: Indian ricegrass, sickle saltbush, western wheatgrass

Inclusion 3: Indian ricegrass, black greasewood, shadscale, thickspike wheatgrass

Inclusion 4: Alkali sacaton, black greasewood, inland saltgrass

Ecological Site

Uvada: 028BY074NV

Ragtown: 028BY097NV

Inclusion 1: 028BY028NV

Inclusion 2: 028BY047NV

Inclusion 3: 028BY021NV

Inclusion 4: 028BY020NV

1272--Katelana, cool-Kawich association***Composition*****Major Components**

Katelana silt loam, cool, 0 to 2 percent slopes--55 percent

Kawich fine sand, 4 to 15 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Playas silty clay, 0 to 1 percent slopes--5 percent

Inclusion 2: Typic Torriorthents, fine-silty, mixed (calcareous), mesic loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins

Katelana--Landform: Lake plains

Kawich--Landform: Dunes

Inclusion 1--Landform: Fan remnants

Inclusion 2--Landform: Lake plains

Major Component Description**Katelana Series**

Elevation: 5,600 to 5,700 feet

Precipitation: About 7 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from limestone and dolomite over lacustrine sediments

Kawich Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 6 inches

Air temperature: About 53 degrees

Frost-free season: About 130 days

Surface layer texture: Fine sand

Drainage class: Excessively drained

Dominant parent material: Eolian sand

Dominant Present Vegetation

Katelana: Black greasewood, bottlebrush squirreltail, shadscale

Kawich: Indian ricegrass, black greasewood, shadscale, thickspike wheatgrass

Inclusion 1: None

Inclusion 2: Indian ricegrass, bud sagebrush, shadscale

Ecological Site

Katelana: 028BY074NV

Kawich: 028BY021NV

Inclusion 1: None

Inclusion 2: 028BY017NV

1280--Sycomat-Kunzler association***Composition*****Major Components**

Sycomat silt loam, 0 to 4 percent slopes--65 percent

Kunzler loam, 0 to 4 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Xerollic Calciorthids, loamy-skeletal, mixed, mesic gravelly loam, 2 to 4 percent slopes--8 percent

Inclusion 2: Pyrat loam, 2 to 4 percent slopes--5 percent

Inclusion 3: Benin silty clay loam, 0 to 2 percent slopes--1 percent

Inclusion 4: Katelana silt loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins

Sycomat--Landform: Barrier beaches

Kunzler--Landform: Barrier beaches

Inclusion 1--Landform: Barrier beaches

Inclusion 2--Landform: Barrier beaches

Inclusion 3--Landform: Lake plains

Inclusion 4--Landform: Lake plains

Major Component Description**Sycomat Series**

Elevation: 5,600 to 5,700 feet

Precipitation: About 7 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Kunzler Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 8 inches

Air temperature: About 48 degrees

Frost-free season: About 120 days

Surface rock fragments: 5 percent gravel

Surface layer texture: Loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from sedimentary rocks

Dominant Present Vegetation

Sycomat: Black greasewood, bottlebrush squirreltail, shadscale

Kunzler: Basin wildrye, big sagebrush, black greasewood

Inclusion 1: Basin wildrye, big sagebrush, black greasewood

Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 3: Alkali sacaton, black greasewood, inland saltgrass

Inclusion 4: Black greasewood, bottlebrush squirreltail, shadscale

Ecological Site

Sycomat: 028BY074NV

Kunzler: 028BY028NV

Inclusion 1: 028BY028NV

Inclusion 2: 028BY010NV

Inclusion 3: 028BY020NV

Inclusion 4: 028BY074NV

1281--Sycomat-Mazuma association***Composition*****Major Components**

Sycomat silt loam, 0 to 2 percent slopes--60 percent

Mazuma silt loam, 0 to 2 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Kunzler silt loam, 0 to 2 percent slopes--7 percent

Inclusion 2: Blimo sandy loam, 0 to 2 percent slopes--4 percent

Inclusion 3: Toano silt loam, 0 to 2 percent slopes--3 percent

Inclusion 4: Idway silt loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins

Sycomat--Landform: Barrier beaches

Mazuma--Landform: Barrier beaches

Inclusion 1--Landform: Barrier beaches

Inclusion 2--Landform: Barrier beaches

Inclusion 3--Landform: Drainageways

Inclusion 4--Landform: Barrier beaches

Major Component Description**Sycomat Series**

Elevation: 5,600 to 6,200 feet

Precipitation: About 7 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Mazuma Series

Elevation: 5,600 to 6,200 feet

Precipitation: About 6 inches

Air temperature: About 50 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Dominant Present Vegetation

Sycomat: Black greasewood, bottlebrush squirreltail, shadscale

Mazuma: Indian ricegrass, bottlebrush squirreltail, shadscale

Inclusion 1: Basin wildrye, big sagebrush, black greasewood
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 3: Indian ricegrass, sickle saltbush, western wheatgrass
 Inclusion 4: Indian ricegrass, Wyoming big sagebrush, needleandthread

Ecological Site

Sycomat: 028BY074NV
 Mazuma: 028BY009NV
 Inclusion 1: 028BY028NV
 Inclusion 2: 028BY010NV
 Inclusion 3: 028BY047NV
 Inclusion 4: 028BY010NV

1290--Heist-Blimo association

Composition

Major Components

Heist fine sandy loam, 0 to 4 percent slopes--45 percent
 Blimo gravelly loam, 0 to 4 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Linoyer silt loam, 0 to 2 percent slopes--5 percent
 Inclusion 2: Xerollic Calciorthis, loamy-skeletal, mixed, mesic very gravelly loam, 2 to 4 percent slopes--4 percent
 Inclusion 3: Tulase silt loam, 0 to 4 percent slopes--4 percent
 Inclusion 4: Loray gravelly loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Heist--Landform: Inset fans
 Blimo--Landform: Fan skirts
 Inclusion 1--Landform: Inset fans
 Inclusion 2--Landform: Fan skirts
 Inclusion 3--Landform: Inset fans
 Inclusion 4--Landform: Fan skirts

Major Component Description

Heist Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 35 percent gravel

Surface layer texture: Fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Blimo Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Heist: Indian ricegrass, winterfat
 Blimo: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, winterfat
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 3: Indian ricegrass, Wyoming big sagebrush, basin wildrye, thickspike wheatgrass, winterfat
 Inclusion 4: Indian ricegrass, bud sagebrush, shadscale

Ecological Site

Heist: 028BY084NV
 Blimo: 028BY010NV
 Inclusion 1: 028BY013NV
 Inclusion 2: 028BY080NV
 Inclusion 3: 028BY045NV
 Inclusion 4: 028BY017NV

1300--Cavehill-Hauchee-Hardzem association

Composition

Major Components

Cavehill very stony silt loam, 15 to 50 percent slopes--45 percent
 Hauchee very gravelly loam, 30 to 75 percent slopes--25 percent
 Hardzem channery loam, 30 to 75 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Wardbay very gravelly loam, 15 to 50 percent slopes--8 percent
 Inclusion 2: Hopeka gravelly loam, 15 to 50 percent slopes--4 percent

Inclusion 3: Halacan very gravelly loam, 8 to 30 percent slopes--2 percent

Inclusion 4: Halacan very gravelly loam, 4 to 15 percent slopes--1 percent

Map Unit Setting

Landscape position: Mountains

Cavehill--Landform: Mountains; geomorphic position: backslope; shape of slope: concave

Haunchee--Landform: Mountains; geomorphic position: backslope; shape of slope: convex

Hardzem--Landform: Mountains; geomorphic position: backslope; aspect: north

Inclusion 1--Landform: Mountains; geomorphic position: backslope

Inclusion 2--Landform: Mountains; geomorphic position: backslope; position on slope: lower; shape of slope: convex

Inclusion 3--Landform: Mountains; geomorphic position: summit

Inclusion 4--Landform: Mountains; geomorphic position: summit

Major Component Description

Cavehill Series

Elevation: 7,000 to 8,000 feet

Precipitation: About 14 inches

Air temperature: About 44 degrees

Frost-free season: About 80 days

Surface rock fragments: 5 percent stones and boulders; 5 percent cobbles; 20 percent gravel

Surface layer texture: Very stony silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Haunchee Series

Elevation: 7,000 to 8,000 feet

Precipitation: About 16 inches

Air temperature: About 42 degrees

Frost-free season: About 50 days

Surface rock fragments: 5 percent cobbles; 50 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Hardzem Series

Elevation: 7,000 to 8,000 feet

Precipitation: About 25 inches

Air temperature: About 40 degrees

Frost-free season: About 60 days

Surface rock fragments: 25 percent cobbles; 45 percent gravel

Surface layer texture: Channery loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Dominant Present Vegetation

Cavehill: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush, singleleaf pinyon

Haunchee: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush

Hardzem: Bluebunch wheatgrass, limber pine, mountain big sagebrush, white fir

Inclusion 1: Idaho fescue, bluebunch wheatgrass, mountain big sagebrush

Inclusion 2: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Inclusion 3: Idaho fescue, black sagebrush, low sagebrush

Inclusion 4: Black sagebrush, bluebunch wheatgrass

Ecological Site

Cavehill: 028BY058NV

Haunchee: 028BY043NV

Hardzem: 028BY063NV

Inclusion 1: 025XY042NV

Inclusion 2: 028BY060NV

Inclusion 3: 025XY024NV

Inclusion 4: 028BY048NV

1360--Toba-Appian association

Composition

Major Components

Toba loam, 0 to 2 percent slopes--60 percent

Appian loam, 0 to 2 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Idway sandy loam, 0 to 2 percent slopes--5 percent

Inclusion 2: Mysol silty clay loam, 0 to 2 percent slopes--5 percent

Inclusion 3: Wendane silt loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins

Toba--Landform: Flood plains

Appian--Landform: Lake terraces

Inclusion 1--Landform: Alluvial flats

Inclusion 2--Landform: Lake plains

Inclusion 3--Landform: Stream terraces

Major Component Description

Toba Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Loam

Drainage class: Poorly drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Appian Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 6 inches

Air temperature: About 50 degrees

Frost-free season: About 110 days

Surface layer texture: Loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

Toba: Alkali sacaton, basin big sagebrush, basin wildrye, mat muhly, rubber rabbitbrush

Appian: Alkali sacaton, bluegrass, mat muhly

Inclusion 1: Basin wildrye, big sagebrush, black greasewood

Inclusion 2: Black greasewood, bottlebrush squirreltail, shadscale

Inclusion 3: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Ecological Site

Toba: 028BY031NV

Appian: 028BY100NV

Inclusion 1: 028BY028NV

Inclusion 2: 028BY074NV

Inclusion 3: 028BY004NV

1370--Orupa-Playas-Boofuss association

Composition

Major Components

Orupa silty clay loam, 0 to 2 percent slopes--40 percent

Playas silty clay loam, 0 to 1 percent slopes--25 percent

Boofuss silty clay, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Wendane silt loam, 0 to 2 percent slopes--5 percent

Inclusion 2: Mysol silty clay loam, 0 to 2 percent slopes--5 percent

Inclusion 3: Idway sandy loam, 0 to 2 percent slopes--3 percent

Inclusion 4: Aeris Halaquepts, fine, montmorillonitic (calcareous), mesic silty clay loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins

Orupa--Landform: Parna dunes

Playas--Landform: Lake plains

Boofuss--Landform: Lake plains

Inclusion 1--Landform: Lake terraces

Inclusion 2--Landform: Lake plains

Inclusion 3--Landform: Fan skirts

Inclusion 4--Landform: Lake plains

Major Component Description

Orupa Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Silty clay loam

Drainage class: Well drained

Dominant parent material: Eolian material

Playas Miscellaneous Area

Elevation: 5,600 to 5,700 feet

Surface layer texture: Silty clay loam

Drainage class: Very poorly drained

Boofuss Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Silty clay

Drainage class: Poorly drained

Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Dominant Present Vegetation

Orupa: Indian ricegrass, black greasewood, shadscale, thickspike wheatgrass

Playas: None

Boofuss: Basin wildrye, black greasewood, inland saltgrass

Inclusion 1: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Inclusion 2: Black greasewood, bottlebrush squirreltail, shadscale

Inclusion 3: Basin wildrye, big sagebrush, black greasewood

Inclusion 4: Inland saltgrass

Ecological Site

Orupa: 028BY020NV

Boofuss: 028BY069NV

Playas: None

Inclusion 1: 028BY004NV

Inclusion 2: 028BY074NV

Inclusion 3: 028BY028NV

Inclusion 4: 028BY050NV

1380--Hulderman-Toba-Benin association

Composition

Major Components

Hulderman fine sandy loam, 0 to 2 percent slopes--55 percent

Toba loam, 0 to 2 percent slopes--15 percent

Benin silty clay loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Wendane silt loam, 0 to 2 percent slopes--5 percent

Inclusion 2: Idway sandy loam, 0 to 2 percent slopes--5 percent

Inclusion 3: Toba fine sandy loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins

Hulderman--Landform: Flood plains

Toba--Landform: Flood plains

Benin--Landform: Lake plains

Inclusion 1--Landform: Stream terraces

Inclusion 2--Landform: Lake plains

Inclusion 3--Landform: Flood plains

Major Component Description

Hulderman Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Fine sandy loam

Drainage class: Poorly drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Toba Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Loam

Drainage class: Poorly drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Benin Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 7 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface layer texture: Silty clay loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

Hulderman: Alkali sacaton, basin big sagebrush, basin wildrye, mat muhly, rubber rabbitbrush

Toba: Alkali sacaton, basin big sagebrush, basin wildrye, mat muhly, rubber rabbitbrush

Benin: Alkali sacaton, black greasewood, inland saltgrass

Inclusion 1: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Inclusion 2: Basin wildrye, big sagebrush, black greasewood

Inclusion 3: Alkali sacaton, bluegrass, mat muhly

Ecological Site

Hulderman: 028BY031NV

Toba: 028BY031NV

Benin: 028BY020NV

Inclusion 1: 028BY004NV

Inclusion 2: 028BY028NV

Inclusion 3: 028BY100NV

1390--Wendane-Mysol-Toba association

Composition

Major Components

Wendane silt loam, 0 to 2 percent slopes--45 percent

Mysol silty clay loam, 0 to 2 percent slopes--25 percent

Toba loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Aquic Natrargids, fine-loamy, mixed, mesic silt loam, 0 to 2 percent slopes--5 percent

Inclusion 2: Aquic Natrargids, fine-loamy over sandy or sandy-skeletal, mixed, mesic silt loam, 0 to 2 percent slopes--5 percent

Inclusion 3: Toba fine sandy loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins

Wendane--Landform: Lake terraces

Mysol--Landform: Alluvial flats

Toba--Landform: Flood plains

Inclusion 1--Landform: Lake terraces

Inclusion 2--Landform: Lake terraces

Inclusion 3--Landform: Flood plains

Major Component Description

Wendane Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 7 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Somewhat poorly drained

Dominant parent material: Alluvium derived from mixed rocks

Mysol Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 7 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface layer texture: Silty clay loam

Drainage class: Well drained

Dominant parent material: Lacustrine sediments derived from mixed rocks

Toba Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Loam

Drainage class: Poorly drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

Wendane: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Mysol: Bottlebrush squirreltail, shadscale

Toba: Alkali sacaton, basin big sagebrush, basin wildrye, mat muhly, rubber rabbitbrush

Inclusion 1: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Inclusion 2: Basin wildrye, big sagebrush, black greasewood

Inclusion 3: Alkali sacaton, bluegrass, mat muhly

Ecological Site

Wendane: 028BY004NV

Mysol: 028BY073NV

Toba: 028BY031NV

Inclusion 1: 028BY004NV

Inclusion 2: 028BY028NV

Inclusion 3: 028BY100NV

1410--Threesee-Tosser association

Composition

Major Components

Threesee gravelly loam, 2 to 8 percent slopes--65 percent

Tosser very gravelly sandy loam, 0 to 4 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Okan gravelly sandy loam, 2 to 4 percent slopes--8 percent

Inclusion 2: Pyrat gravelly sandy loam, 2 to 4 percent slopes--4 percent

Inclusion 3: Heist gravelly sandy loam, 0 to 2 percent slopes--2 percent

Inclusion 4: Kunzler silt loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins

Threesee--Landform: Barrier beaches

Tosser--Landform: Spits

Inclusion 1--Landform: Drainageways

Inclusion 2--Landform: Barrier beaches

Inclusion 3--Landform: Lagoons

Inclusion 4--Landform: Fan skirts

Major Component Description

Threesee Series

Elevation: 5,600 to 6,100 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Tosser Series

Elevation: 5,600 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 70 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Threese: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Tosser: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, spiny hopsage
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 3: Indian ricegrass, winterfat
 Inclusion 4: Basin wildrye, big sagebrush, black greasewood

Ecological Site

Threese: 028BY010NV
 Tosser: 028BY016NV
 Inclusion 1: 028BY052NV
 Inclusion 2: 028BY010NV
 Inclusion 3: 028BY084NV
 Inclusion 4: 028BY028NV

1411--Threese-Linoyer-Okan association

Composition

Major Components

Threese very gravelly sandy loam, 2 to 4 percent slopes--45 percent
 Linoyer gravelly fine sandy loam, 2 to 4 percent slopes--25 percent
 Okan sandy loam, 2 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Kunzler silt loam, 0 to 2 percent slopes--5 percent
 Inclusion 2: Linoyer silt loam, 2 to 4 percent slopes--5 percent
 Inclusion 3: Threese very gravelly sandy loam, 2 to 8 percent slopes--3 percent

Inclusion 4: Tosser very gravelly sandy loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
 Threese--Landform: Barrier beaches
 Linoyer--Landform: Fan aprons
 Okan--Landform: Fan aprons
 Inclusion 1--Landform: Barrier beaches
 Inclusion 2--Landform: Fan aprons
 Inclusion 3--Landform: Barrier beaches
 Inclusion 4--Landform: Spits

Major Component Description

Threese Series

Elevation: 5,600 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Linoyer Series

Elevation: 5,600 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Okan Series

Elevation: 5,600 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Threese: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Linoyer: Indian ricegrass, winterfat
 Okan: Indian ricegrass, Wyoming big sagebrush, needleandthread

Inclusion 1: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail
 Inclusion 2: Indian ricegrass, winterfat
 Inclusion 3: Indian ricegrass, Wyoming big sagebrush, spiny hopsage
 Inclusion 4: Indian ricegrass, black sagebrush, needleandthread

Ecological Site

Threese: 028BY010NV
 Linoyer: 028BY084NV
 Okan: 028BY010NV
 Inclusion 1: 028BY056NV
 Inclusion 2: 028BY013NV
 Inclusion 3: 028BY052NV
 Inclusion 4: 028BY016NV

1412--Threese-Idway association

Composition

Major Components

Threese very gravelly sandy loam, 2 to 4 percent slopes--60 percent
 Idway loamy sand, 2 to 4 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Xerollic Calciorthis, sandy-skeletal, mixed, mesic very gravelly sandy loam, 2 to 8 percent slopes--9 percent
 Inclusion 2: Katelana silt loam, 0 to 2 percent slopes--4 percent
 Inclusion 3: Kawich fine sand, 4 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
 Threese--Landform: Spits
 Idway--Landform: Barrier beaches
 Inclusion 1--Landform: Spits
 Inclusion 2--Landform: Lagoons
 Inclusion 3--Landform: Dunes

Major Component Description

Threese Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Idway Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 25 percent gravel
 Surface layer texture: Loamy sand
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Threese: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Idway: Basin wildrye, big sagebrush, black greasewood
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, spiny hopsage
 Inclusion 2: Black greasewood, bottlebrush squirreltail, shadscale
 Inclusion 3: Indian ricegrass, black greasewood, shadscale, thickspike wheatgrass

Ecological Site

Threese: 028BY010NV
 Idway: 028BY028NV
 Inclusion 1: 028BY052NV
 Inclusion 2: 028BY074NV
 Inclusion 3: 028BY021NV

1413--Idway-Zorravista-Kunzler association

Composition

Major Components

Idway sandy loam, 2 to 4 percent slopes--35 percent
 Zorravista loamy fine sand, 2 to 15 percent slopes--30 percent
 Kunzler silt loam, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Sycomat silt loam, 0 to 2 percent slopes--8 percent
 Inclusion 2: Sheffit silty clay loam, 0 to 2 percent slopes--7 percent

Map Unit Setting

Landscape position: Intermontane basins
 Idway--Landform: Barrier beaches
 Zorravista--Landform: Dunes

Kunzler--Landform: Barrier beaches
 Inclusion 1--Landform: Lagoons
 Inclusion 2--Landform: Lagoons

Major Component Description

Idway Series

Elevation: 6,000 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 25 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Zorravista Series

Elevation: 6,000 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 48 degrees
 Frost-free season: About 115 days
 Surface layer texture: Loamy fine sand
 Drainage class: Excessively drained
 Dominant parent material: Eolian material

Kunzler Series

Elevation: 6,000 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 48 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from sedimentary rocks

Dominant Present Vegetation

Idway: Basin wildrye, big sagebrush, black greasewood
 Zorravista: Indian ricegrass, big sagebrush, thickspike wheatgrass
 Kunzler: Basin wildrye, big sagebrush, black greasewood
 Inclusion 1: Black greasewood, bottlebrush squirreltail, shadscale
 Inclusion 2: Basin wildrye, big sagebrush, black greasewood

Ecological Site

Idway: 028BY028NV
 Zorravista: 028BY068NV
 Kunzler: 028BY028NV
 Inclusion 1: 028BY074NV
 Inclusion 2: 028BY028NV

1414--Threesee-Shantown-Kunzler association

Composition

Major Components

Threesee very gravelly sandy loam, 0 to 4 percent slopes--35 percent
 Shantown gravelly loamy sand, 0 to 2 percent slopes--30 percent
 Kunzler loam, 0 to 4 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Durixerollic Camborthids, fine-loamy, mixed, mesic loam, 0 to 2 percent slopes--5 percent
 Inclusion 2: Wendane silt loam, 0 to 2 percent slopes--5 percent
 Inclusion 3: James Canyon loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
 Threesee--Landform: Barrier beaches
 Shantown--Landform: Barrier beaches
 Kunzler--Landform: Barrier beaches
 Inclusion 1--Landform: Barrier beaches
 Inclusion 2--Landform: Alluvial flats
 Inclusion 3--Landform: Flood plains

Major Component Description

Threesee Series

Elevation: 5,600 to 6,300 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Shantown Series

Elevation: 5,600 to 6,300 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly loamy sand
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from granitic rocks

Kunzler Series

Elevation: 5,600 to 6,300 feet
 Precipitation: About 8 inches

Air temperature: About 48 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from
 sedimentary rocks

Dominant Present Vegetation

Threese: Indian ricegrass, Wyoming big sagebrush,
 needleandthread
 Shantown: Indian ricegrass, Wyoming big sagebrush,
 needleandthread
 Kunzler: Basin wildrye, big sagebrush, black
 greasewood
 Inclusion 1: Basin wildrye, big sagebrush, black
 greasewood
 Inclusion 2: Basin wildrye, black greasewood, inland
 saltgrass, rubber rabbitbrush
 Inclusion 3: Alkali sacaton, bluegrass, mat muhly

Ecological Site

Threese: 028BY010NV
 Shantown: 028BY010NV
 Kunzler: 028BY028NV
 Inclusion 1: 028BY028NV
 Inclusion 2: 028BY004NV
 Inclusion 3: 028BY100NV

1430--Pookaloo-Tecomar-Rock outcrop association

Composition

Major Components

Pookaloo very gravelly loam, 15 to 50 percent slopes--
 40 percent
 Tecomar extremely gravelly loam, 15 to 50 percent
 slopes--30 percent
 Rock outcrop--15 percent

Contrasting Inclusions

Inclusion 1: Hyzen extremely stony loam, 15 to 50
 percent slopes--6 percent
 Inclusion 2: Halacan very gravelly loam, 15 to 50
 percent slopes--6 percent
 Inclusion 3: Onkeyo very gravelly silt loam, 15 to 50
 percent slopes--2 percent
 Inclusion 4: Aridic Haploxerolls, loamy-skeletal, mixed,
 mesic very gravelly loam, 4 to 15 percent slopes--1
 percent

Map Unit Setting

Landscape position: Mountains

Pookaloo--Landform: Mountains; geomorphic position:
 summit
 Tecomar--Landform: Mountains; geomorphic position:
 summit
 Rock outcrop--Landform: Mountains
 Inclusion 1--Landform: Mountains; geomorphic position:
 backslope; position on slope: upper
 Inclusion 2--Landform: Mountains; position on slope:
 upper
 Inclusion 3--Landform: Mountains; geomorphic position:
 backslope; position on slope: upper
 Inclusion 4--Landform: Mountains

Major Component Description

Pookaloo Series

Elevation: 5,800 to 8,300 feet
 Precipitation: About 12 inches
 Air temperature: About 46 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 50 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from limestone and dolomite

Tecomar Series

Elevation: 5,800 to 8,300 feet
 Precipitation: About 12 inches
 Air temperature: About 46 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 5 percent cobbles; 60 percent
 gravel
 Surface layer texture: Extremely gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from limestone and dolomite

Rock outcrop Miscellaneous Area

Elevation: 5,800 to 8,300 feet

Dominant Present Vegetation

Pookaloo: Utah juniper, black sagebrush, bluebunch
 wheatgrass, singleleaf pinyon
 Tecomar: Indian ricegrass, black sagebrush, bluebunch
 wheatgrass
 Rock outcrop: None
 Inclusion 1: Indian ricegrass, black sagebrush, littleleaf
 mountainmahogany
 Inclusion 2: Black sagebrush, bluebunch wheatgrass
 Inclusion 3: Indian ricegrass, bluebunch wheatgrass,
 mountain big sagebrush
 Inclusion 4: Thurber needlegrass, big sagebrush,
 bluebunch wheatgrass

Ecological Site

Pookaloo: 028BY060NV
 Tecomar: 028BY008NV
 Rock outcrop: None
 Inclusion 1: 028BY066NV
 Inclusion 2: 028BY048NV
 Inclusion 3: 028BY079NV
 Inclusion 4: 028BY007NV

1440--Boofuss-Equis association***Composition*****Major Components**

Boofuss silty clay, 0 to 2 percent slopes--35 percent
 Boofuss silty clay, dry, 0 to 2 percent slopes--30 percent
 Equis silty clay, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Typic Torriorthents, fine-silty, mixed (calcareous), mesic silt loam, 2 to 4 percent slopes--10 percent
 Inclusion 2: Equis silty clay, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
 Boofuss--Landform: Alluvial flats
 Boofuss--Landform: Alluvial flats
 Equis--Landform: Alluvial flats
 Inclusion 1--Landform: Alluvial flats
 Inclusion 2--Landform: Alluvial flats

Major Component Description**Boofuss Series**

Elevation: 5,800 to 5,900 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Boofuss Series

Elevation: 5,800 to 5,900 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Equis Series

Elevation: 5,800 to 5,900 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Dominant Present Vegetation

Boofuss: Basin wildrye, black greasewood, inland saltgrass
 Boofuss: Alkali sacaton, black greasewood, inland saltgrass
 Equis: Alkali cordgrass, alkali sacaton, inland saltgrass
 Inclusion 1: Black greasewood, bottlebrush squirreltail, shadscale
 Inclusion 2: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Ecological Site

Boofuss: 028BY069NV
 Boofuss: 028BY020NV
 Equis: 028BY002NV
 Inclusion 1: 028BY074NV
 Inclusion 2: 028BY004NV

1441--Boofuss-Wendane-Umberland association***Composition*****Major Components**

Boofuss silty clay, 0 to 2 percent slopes--40 percent
 Wendane silt loam, 0 to 4 percent slopes--35 percent
 Umberland silty clay, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Playas silty clay, 0 to 1 percent slopes--5 percent
 Inclusion 2: Umberland silty clay, 0 to 1 percent slopes--4 percent
 Inclusion 3: Typic Torriorthents, fine, montmorillonitic (calcareous), mesic silt loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
 Boofuss--Landform: Lake plains
 Wendane--Landform: Lake terraces
 Umberland--Landform: Lake plains
 Inclusion 1--Landform: Lake plains
 Inclusion 2--Landform: Lake plains

Inclusion 3--Landform: Lake plains

Major Component Description

Boofuss Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Wendane Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Somewhat poorly drained
 Dominant parent material: Alluvium derived from mixed rocks

Umlerland Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Somewhat poorly drained
 Dominant parent material: Lacustrine sediments derived from volcanic rocks

Dominant Present Vegetation

Boofuss: Alkali cordgrass, alkali sacaton, inland saltgrass
 Wendane: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Umlerland: Alkali sacaton, black greasewood, inland saltgrass
 Inclusion 1: None
 Inclusion 2: Alkali sacaton, black greasewood, inland saltgrass
 Inclusion 3: Inland saltgrass, iodinebush

Ecological Site

Boofuss: 028BY002NV
 Wendane: 028BY004NV
 Umlerland: 028BY020NV
 Inclusion 1: None
 Inclusion 2: 028BY020NV
 Inclusion 3: 028AY009NV

1450--Piltdown-Kawich association

Composition

Major Components

Piltdown fine sandy loam, 2 to 8 percent slopes--70 percent
 Kawich fine sand, 4 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Xerollic Natrargids, fine-loamy, mixed, mesic fine sandy loam, 0 to 2 percent slopes--7 percent
 Inclusion 2: Xerollic Natrargids, fine-loamy, mixed, mesic fine sandy loam, 0 to 2 percent slopes--4 percent
 Inclusion 3: Typic Torriorthents, coarse-loamy, mixed (calcareous), mesic fine sandy loam, 0 to 2 percent slopes--3 percent
 Inclusion 4: Dune land fine sand, 8 to 30 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Piltdown--Landform: Fan skirts
 Kawich--Landform: Dunes
 Inclusion 1--Landform: Basin floors
 Inclusion 2--Landform: Basin floors
 Inclusion 3--Landform: Basin floors
 Inclusion 4--Landform: Dunes

Major Component Description

Piltdown Series

Elevation: 5,700 to 6,100 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Kawich Series

Elevation: 5,700 to 6,100 feet
 Precipitation: About 6 inches
 Air temperature: About 53 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Fine sand
 Drainage class: Excessively drained
 Dominant parent material: Eolian sand

Dominant Present Vegetation

Piltdown: Indian ricegrass, fourwing saltbush, winterfat
 Kawich: Indian ricegrass, black greasewood, shadscale, thickspike wheatgrass
 Inclusion 1: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail

Inclusion 2: Indian ricegrass, black sagebrush,
needleandthread
Inclusion 3: Basin wildrye, big sagebrush, black
greasewood
Inclusion 4: None

Ecological Site

Pitldown: 029XY012NV
Kawich: 028BY021NV
Inclusion 1: 028BY056NV
Inclusion 2: 028BY011NV
Inclusion 3: 028BY028NV
Inclusion 4: None

1460--Tosser-Threese association

Composition

Major Components

Tosser very gravelly sandy loam, 2 to 8 percent slopes--
-65 percent
Threese gravelly loam, 2 to 8 percent slopes--20
percent

Contrasting Inclusions

Inclusion 1: Katelana silt loam, 0 to 2 percent slopes--5
percent
Inclusion 2: Xerollic Camborthids, fine-loamy over
sandy or sandy-skeletal, mixed, mesic silt loam, 0 to 2
percent slopes--5 percent
Inclusion 3: Durixerollic Camborthids, coarse-loamy,
mixed, mesic gravelly loamy sand, 0 to 2 percent
slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
Tosser--Landform: Longshore bars (relict)
Threese--Landform: Longshore bars (relict); shape of
slope: concave
Inclusion 1--Landform: Lagoons
Inclusion 2--Landform: Lagoons
Inclusion 3--Landform: Longshore bars (relict)

Major Component Description

Tosser Series

Elevation: 5,600 to 6,200 feet
Precipitation: About 8 inches
Air temperature: About 47 degrees
Frost-free season: About 120 days
Surface rock fragments: 70 percent gravel
Surface layer texture: Very gravelly sandy loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed
rocks

Threese Series

Elevation: 5,600 to 6,200 feet
Precipitation: About 8 inches
Air temperature: About 47 degrees
Frost-free season: About 110 days
Surface rock fragments: 20 percent gravel
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed
rocks

Dominant Present Vegetation

Tosser: Indian ricegrass, black sagebrush,
needleandthread
Threese: Indian ricegrass, Wyoming big sagebrush,
needleandthread
Inclusion 1: Bottlebrush squirreltail, shadscale
Inclusion 2: Wyoming big sagebrush, bluegrass,
bottlebrush squirreltail
Inclusion 3: Indian ricegrass, Wyoming big sagebrush,
needleandthread

Ecological Site

Tosser: 028BY016NV
Threese: 028BY010NV
Inclusion 1: 028BY073NV
Inclusion 2: 028BY056NV
Inclusion 3: 028BY010NV

1471--Timpie-Kunzler-Threese association

Composition

Major Components

Timpie silt loam, 0 to 2 percent slopes--35 percent
Kunzler silt loam, 0 to 2 percent slopes--30 percent
Threese very gravelly sandy loam, 2 to 8 percent
slopes--20 percent

Contrasting Inclusions

Inclusion 1: Zerk very gravelly sandy loam, 2 to 8
percent slopes--8 percent
Inclusion 2: Blimo silt loam, 0 to 2 percent slopes--7
percent

Map Unit Setting

Landscape position: Intermontane basins
Timpie--Landform: Barrier beaches
Kunzler--Landform: Barrier beaches
Threese--Landform: Spits
Inclusion 1--Landform: Spits
Inclusion 2--Landform: Lagoons

Major Component Description**Timpie Series**

Elevation: 6,000 to 6,100 feet
 Precipitation: About 7 inches
 Air temperature: About 49 degrees
 Frost-free season: About 130 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Kunzler Series

Elevation: 6,000 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 48 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from sedimentary rocks

Threese Series

Elevation: 6,000 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Timpie: Indian ricegrass, winterfat
 Kunzler: Wyoming big sagebrush, bluegrass, bottlebrush squirreltail
 Threese: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 1: Indian ricegrass, winterfat
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, wheatgrass

Ecological Site

Timpie: 028BY084NV
 Kunzler: 028BY056NV
 Threese: 028BY010NV
 Inclusion 1: 028BY084NV
 Inclusion 2: 028BY014NV

1480--Tulase-Linoyer association**Composition****Major Components**

Tulase silt loam, 2 to 4 percent slopes--60 percent

Linoyer silt loam, 2 to 4 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Shabliis gravelly silt loam, 2 to 4 percent slopes--5 percent
 Inclusion 2: Toano silt loam, 2 to 4 percent slopes--4 percent
 Inclusion 3: Palinor gravelly loam, 2 to 4 percent slopes--3 percent
 Inclusion 4: Okan gravelly sandy loam, 2 to 4 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Tulase--Landform: Fan skirts
 Linoyer--Landform: Fan skirts
 Inclusion 1--Landform: Fan remnants
 Inclusion 2--Landform: Fan skirts
 Inclusion 3--Landform: Fan remnants
 Inclusion 4--Landform: Fan skirts

Major Component Description**Tulase Series**

Elevation: 5,600 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Linoyer Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Tulase: Indian ricegrass, Wyoming big sagebrush, basin wildrye, winterfat
 Linoyer: Indian ricegrass, winterfat
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 2: Indian ricegrass, sickle saltbush, western wheatgrass
 Inclusion 3: Indian ricegrass, black sagebrush, needleandthread
 Inclusion 4: Indian ricegrass, Wyoming big sagebrush, spiny hopsage

Ecological Site

Tulase: 028BY045NV
 Linoyer: 028BY013NV
 Inclusion 1: 028BY080NV
 Inclusion 2: 028BY065NV
 Inclusion 3: 028BY011NV
 Inclusion 4: 028BY052NV

1500--Tooele-Loray association***Composition*****Major Components**

Tooele sandy loam, 2 to 4 percent slopes--70 percent
 Loray gravelly sandy loam, 2 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Typic Haplargids, fine-loamy, mixed, mesic silt loam, 2 to 4 percent slopes--6 percent
 Inclusion 2: Kawich fine sand, 4 to 15 percent slopes--4 percent
 Inclusion 3: Saltair silt loam, 0 to 2 percent slopes--3 percent
 Inclusion 4: Typic Torriorthents, sandy-skeletal, mixed, mesic very gravelly sand, 2 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
 Tooele--Landform: Lake terraces
 Loray--Landform: Barrier beaches
 Inclusion 1--Landform: Lake terraces
 Inclusion 2--Landform: Dunes
 Inclusion 3--Landform: Lake plains
 Inclusion 4--Landform: Drainageways

Major Component Description**Tooele Series**

Elevation: 4,300 to 4,500 feet
 Precipitation: About 7 inches
 Air temperature: About 50 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 25 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Loray Series

Elevation: 4,300 to 4,500 feet
 Precipitation: About 6 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 40 percent gravel

Surface layer texture: Gravelly sandy loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Tooele: Black greasewood, bottlebrush squirreltail, shadscale
 Loray: Indian ricegrass, bud sagebrush, galleta, shadscale
 Inclusion 1: Black greasewood, bottlebrush squirreltail, shadscale
 Inclusion 2: Indian ricegrass, black greasewood, shadscale, thickspike wheatgrass
 Inclusion 3: Inland saltgrass, iodinebush
 Inclusion 4: Indian ricegrass, fourwing saltbush, spiny hopsage

Ecological Site

Tooele: 028BY074NV
 Loray: 028AY012NV
 Inclusion 1: 028BY074NV
 Inclusion 2: 028BY021NV
 Inclusion 3: 028AY009NV
 Inclusion 4: 028AY037NV

1510--Izamat-Chiffdown association***Composition*****Major Components**

Izamat gravelly sandy loam, 2 to 4 percent slopes--45 percent
 Chiffdown very gravelly sandy loam, 2 to 4 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Vitrandic Camborthids, sandy-skeletal, mixed, mesic gravelly sandy loam, 2 to 4 percent slopes--5 percent
 Inclusion 2: Typic Torriorthents, sandy-skeletal, mixed, mesic gravelly loam, 2 to 8 percent slopes--5 percent
 Inclusion 3: Typic Torriorthents, sandy-skeletal, mixed, mesic extremely gravelly sand, 2 to 4 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
 Izamat--Landform: Barrier beaches; position on slope: upper
 Chiffdown--Landform: Barrier beaches; position on slope: lower
 Inclusion 1--Landform: Fan aprons

Inclusion 2--Landform: Barrier beaches; position on slope: lower

Inclusion 3--Landform: Drainageways

Major Component Description

Izamatch Series

Elevation: 4,200 to 5,000 feet

Precipitation: About 6 inches

Air temperature: About 52 degrees

Frost-free season: About 130 days

Surface rock fragments: 50 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Somewhat excessively drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Cliffdown Series

Elevation: 4,200 to 5,000 feet

Precipitation: About 6 inches

Air temperature: About 52 degrees

Frost-free season: About 130 days

Surface rock fragments: 5 percent cobbles; 35 percent gravel

Surface layer texture: Very gravelly sandy loam

Drainage class: Somewhat excessively drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Izamatch: Indian ricegrass, galleta, shadscale

Cliffdown: Indian ricegrass, bud sagebrush, galleta, shadscale

Inclusion 1: Indian ricegrass, galleta, horsebrush, shadscale

Inclusion 2: Black greasewood, bottlebrush squirreltail, shadscale

Inclusion 3: Indian ricegrass, fourwing saltbush, spiny hopsage

Ecological Site

Izamatch: 028AY018NV

Cliffdown: 028AY012NV

Inclusion 1: 028AY014NV

Inclusion 2: 028BY074NV

Inclusion 3: 028AY037NV

1520--Izamatch-Luning association

Composition

Major Components

Izamatch gravelly sandy loam, 2 to 4 percent slopes--35 percent

Izamatch gravelly sandy loam, 4 to 8 percent slopes--30 percent

Luning loamy sand, 4 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Armespan very gravelly sandy loam, 2 to 8 percent slopes--4 percent

Inclusion 2: Typic Torriorthents, sandy-skeletal, mixed, mesic very gravelly sand, 0 to 2 percent slopes--4 percent

Inclusion 3: Typic Torriorthents, coarse-loamy, mixed (calcareous), mesic sandy loam, 2 to 8 percent slopes--4 percent

Inclusion 4: Loray very gravelly sandy loam, 2 to 8 percent slopes--3 percent

Map Unit Setting

Landscape position: Intermontane basins

Izamatch--Landform: Barrier beaches

Izamatch--Landform: Fan aprons

Luning--Landform: Barrier beaches

Inclusion 1--Landform: Barrier beaches

Inclusion 2--Landform: Drainageways

Inclusion 3--Landform: Drainageways

Inclusion 4--Landform: Barrier beaches; position on slope: lower

Major Component Description

Izamatch Series

Elevation: 4,400 to 5,200 feet

Precipitation: About 6 inches

Air temperature: About 52 degrees

Frost-free season: About 130 days

Surface rock fragments: 50 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Somewhat excessively drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Izamatch Series

Elevation: 4,400 to 5,200 feet

Precipitation: About 6 inches

Air temperature: About 52 degrees

Frost-free season: About 130 days

Surface rock fragments: 50 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Somewhat excessively drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Luning Series

Elevation: 4,400 to 5,200 feet

Precipitation: About 5 inches

Air temperature: About 52 degrees

Frost-free season: About 130 days

Surface rock fragments: 10 percent gravel

Surface layer texture: Loamy sand
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Izamatch: Indian ricegrass, galleta, shadscale
 Izamatch: Indian ricegrass, galleta, horsebrush, shadscale
 Luning: Indian ricegrass, galleta, horsebrush, shadscale
 Inclusion 1: Indian ricegrass, black sagebrush, galleta, needleandthread
 Inclusion 2: Indian ricegrass, fourwing saltbush, spiny hopsage
 Inclusion 3: Indian ricegrass, fourwing saltbush, spiny hopsage
 Inclusion 4: Indian ricegrass, bud sagebrush, galleta, shadscale

Ecological Site

Izamatch: 028AY018NV
 Izamatch: 028AY014NV
 Luning: 028AY014NV
 Inclusion 1: 028AY004NV
 Inclusion 2: 028AY037NV
 Inclusion 3: 028AY006NV
 Inclusion 4: 028AY003NV

1521--Izamatch-Theriot association

Composition

Major Components

Izamatch gravelly sandy loam, moist, 2 to 8 percent slopes--40 percent
 Izamatch gravelly sandy loam, 2 to 8 percent slopes--25 percent
 Theriot extremely stony loam, 8 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Kyler very gravelly loam, 4 to 15 percent slopes--8 percent
 Inclusion 2: Typic Torriorthents, sandy-skeletal, mixed, mesic extremely gravelly coarse sand, 2 to 8 percent slopes--3 percent
 Inclusion 3: Gravier gravelly sandy loam, 2 to 8 percent slopes--2 percent
 Inclusion 4: Armespan very gravelly sandy loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills and intermontane basins

Izamatch--Landform: Barrier beaches
 Izamatch--Landform: Fan aprons
 Theriot--Landform: Hills
 Inclusion 1--Landform: Hills
 Inclusion 2--Landform: Drainageways
 Inclusion 3--Landform: Barrier beaches
 Inclusion 4--Landform: Barrier beaches; position on slope: upper

Major Component Description

Izamatch Series

Elevation: 4,500 to 5,200 feet
 Precipitation: About 6 inches
 Air temperature: About 52 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 50 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Izamatch Series

Elevation: 4,500 to 5,200 feet
 Precipitation: About 6 inches
 Air temperature: About 52 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 50 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Theriot Series

Elevation: 4,500 to 5,200 feet
 Precipitation: About 6 inches
 Air temperature: About 52 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 25 percent cobbles; 50 percent gravel
 Surface layer texture: Extremely stony loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Izamatch: Indian ricegrass, galleta, shadscale
 Izamatch: Indian ricegrass, galleta, horsebrush, shadscale
 Theriot: Indian ricegrass, black sagebrush, horsebrush, needleandthread
 Inclusion 1: Indian ricegrass, black sagebrush, galleta, needleandthread
 Inclusion 2: Indian ricegrass, fourwing saltbush, spiny hopsage

Inclusion 3: Indian ricegrass, galleta, winterfat
 Inclusion 4: Indian ricegrass, black sagebrush, galleta, needleandthread

Ecological Site

Izamatch: 028AY018NV
 Izamatch: 028AY014NV
 Theriot: 028AY044NV
 Inclusion 1: 028AY004NV
 Inclusion 2: 028AY037NV
 Inclusion 3: 028AY002NV
 Inclusion 4: 028AY004NV

1522--Izamatch-Smaug-Badland association

Composition

Major Components

Izamatch gravelly sandy loam, 2 to 4 percent slopes--40 percent
 Smaug fine sandy loam, 2 to 4 percent slopes--30 percent
 Badland variable, 4 to 30 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Typic Torriorthents, sandy-skeletal, mixed, mesic extremely gravelly coarse sand, 2 to 8 percent slopes--5 percent
 Inclusion 2: Gravier gravelly sandy loam, 2 to 8 percent slopes--5 percent
 Inclusion 3: Luning gravelly loamy sand, 2 to 4 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
 Izamatch--Landform: Barrier beaches
 Smaug--Landform: Lake terraces
 Badland--Landform: Fan remnants
 Inclusion 1--Landform: Drainageways
 Inclusion 2--Landform: Barrier beaches
 Inclusion 3--Landform: Barrier beaches

Major Component Description

Izamatch Series

Elevation: 4,500 to 4,900 feet
 Precipitation: About 6 inches
 Air temperature: About 52 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 50 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Smaug Series

Elevation: 4,500 to 4,900 feet
 Precipitation: About 7 inches
 Air temperature: About 50 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Lacustrine sediments derived from volcanic rocks

Badland Miscellaneous Area

Elevation: 4,500 to 4,900 feet
 Surface layer texture: Variable
 Drainage class: Well drained

Dominant Present Vegetation

Izamatch: Indian ricegrass, galleta, shadscale
 Smaug: Indian ricegrass, galleta, winterfat
 Badland: None
 Inclusion 1: Indian ricegrass, fourwing saltbush, spiny hopsage
 Inclusion 2: Indian ricegrass, galleta, winterfat
 Inclusion 3: Indian ricegrass, galleta, horsebrush, shadscale

Ecological Site

Izamatch: 028AY018NV
 Smaug: 028AY002NV
 Badland: None
 Inclusion 1: 028AY037NV
 Inclusion 2: 028AY002NV
 Inclusion 3: 028AY014NV

1530--Theriot-Izamatch association

Composition

Major Components

Theriot extremely stony loam, 8 to 30 percent slopes--40 percent
 Theriot very gravelly silt loam, 8 to 30 percent slopes--25 percent
 Izamatch very gravelly sandy loam, 4 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Rock outcrop--7 percent
 Inclusion 2: Kyler very gravelly loam, 8 to 30 percent slopes--6 percent
 Inclusion 3: Gravier gravelly loam, 2 to 4 percent slopes--1 percent
 Inclusion 4: Typic Torriorthents, sandy-skeletal, mixed, mesic very gravelly sand, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Hills and intermontane basins

Theriot--Landform: Hills

Theriot--Landform: Hills

Izamatch--Landform: Barrier beaches

Inclusion 1--Landform: Hills; geomorphic position: summit

Inclusion 2--Landform: Hills; geomorphic position: backslope

Inclusion 3--Landform: Barrier beaches

Inclusion 4--Landform: Drainageways

Major Component Description**Theriot Series**

Elevation: 4,400 to 5,600 feet

Precipitation: About 6 inches

Air temperature: About 52 degrees

Frost-free season: About 130 days

Surface rock fragments: 5 percent cobbles; 40 percent gravel

Surface layer texture: Extremely stony loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Theriot Series

Elevation: 4,400 to 5,600 feet

Precipitation: About 6 inches

Air temperature: About 52 degrees

Frost-free season: About 130 days

Surface rock fragments: 5 percent cobbles; 50 percent gravel

Surface layer texture: Very gravelly silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Izamatch Series

Elevation: 4,400 to 5,000 feet

Precipitation: About 6 inches

Air temperature: About 52 degrees

Frost-free season: About 130 days

Surface rock fragments: 50 percent gravel

Surface layer texture: Very gravelly sandy loam

Drainage class: Somewhat excessively drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Theriot: Indian ricegrass, black sagebrush, horsebrush, needleandthread

Theriot: Indian ricegrass, bud sagebrush, galleta, shadscale

Izamatch: Indian ricegrass, galleta, shadscale

Inclusion 1: None

Inclusion 2: Indian ricegrass, black sagebrush, galleta, needleandthread

Inclusion 3: Indian ricegrass, galleta, winterfat

Inclusion 4: Indian ricegrass, fourwing saltbush, spiny hopsage

Ecological Site

Theriot: 028AY044NV

Theriot: 028AY003NV

Izamatch: 028AY018NV

Inclusion 1: None

Inclusion 2: 028AY004NV

Inclusion 3: 028AY002NV

Inclusion 4: 028AY037NV

1531--Theriot-Izamatch-Rock outcrop association**Composition****Major Components**

Theriot extremely stony loam, 15 to 50 percent slopes--50 percent

Izamatch very cobbly fine sandy loam, 8 to 30 percent slopes--20 percent

Rock outcrop--15 percent

Contrasting Inclusions

Inclusion 1: Theriot extremely stony loam, 2 to 15 percent slopes--5 percent

Inclusion 2: Lithic Torriorthents, loamy-skeletal, mixed (calcareous), mesic extremely stony loam, 15 to 50 percent slopes--6 percent

Inclusion 3: Gravier very gravelly sandy loam, 2 to 15 percent slopes--3 percent

Inclusion 4: Badland, 4 to 30 percent slopes--1 percent

Map Unit Setting

Landscape position: Hills and intermontane basins

Theriot--Landform: Hills

Izamatch--Landform: Spits

Rock outcrop--Landform: Hills

Inclusion 1--Landform: Hills

Inclusion 2--Landform: Hills; geomorphic position: summit

Inclusion 3--Landform: Barrier beaches

Inclusion 4--Landform: Lake terraces

Major Component Description**Theriot Series**

Elevation: 4,500 to 6,100 feet

Precipitation: About 6 inches
 Air temperature: About 52 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 25 percent cobbles; 50 percent gravel
 Surface layer texture: Extremely stony loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Izamatch Series

Elevation: 4,500 to 5,500 feet
 Precipitation: About 6 inches
 Air temperature: About 52 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 20 percent cobbles; 50 percent gravel
 Surface layer texture: Very cobbly fine sandy loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Rock outcrop Miscellaneous Area

Elevation: 4,500 to 6,100 feet

Dominant Present Vegetation

Theriot: Indian ricegrass, black sagebrush, horsebrush, needleandthread
 Izamatch: Indian ricegrass, bud sagebrush, galleta, shadscale
 Rock outcrop: None
 Inclusion 1: Indian ricegrass, black sagebrush, horsebrush, needleandthread
 Inclusion 2: Indian ricegrass, bud sagebrush, galleta, shadscale
 Inclusion 3: Indian ricegrass, shadscale
 Inclusion 4: None

Ecological Site

Theriot: 028AY044NV
 Izamatch: 028AY003NV
 Rock outcrop: None
 Inclusion 1: 028AY044NV
 Inclusion 2: 028AY003NV
 Inclusion 3: 028BY018NV
 Inclusion 4: None

1532--Theriot-Rock outcrop association

Composition

Major Components

Theriot cobbly fine sandy loam, 15 to 50 percent slopes--40 percent

Theriot extremely stony loam, 15 to 50 percent slopes--30 percent
 Rock outcrop--15 percent

Contrasting Inclusions

Inclusion 1: Kyler cobbly loam, 15 to 50 percent slopes--5 percent
 Inclusion 2: Izamatch gravelly sandy loam, 4 to 15 percent slopes--5 percent
 Inclusion 3: Typic Torriorthents, sandy-skeletal, mixed, mesic extremely gravelly coarse sand, 2 to 8 percent slopes--5 percent

Map Unit Setting

Landscape position: Hills and intermontane basins

Theriot--Landform: Hills

Theriot--Landform: Hills

Rock outcrop--Landform: Hills

Inclusion 1--Landform: Hills; position on slope: upper

Inclusion 2--Landform: Barrier beaches

Inclusion 3--Landform: Drainageways

Major Component Description

Theriot Series

Elevation: 4,400 to 5,800 feet
 Precipitation: About 6 inches
 Air temperature: About 52 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 25 percent cobbles; 50 percent gravel
 Surface layer texture: Cobbly fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Theriot Series

Elevation: 4,400 to 5,800 feet
 Precipitation: About 6 inches
 Air temperature: About 52 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 5 percent cobbles; 40 percent gravel
 Surface layer texture: Extremely stony loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Rock outcrop Miscellaneous Area

Elevation: 4,400 to 5,800 feet

Dominant Present Vegetation

Theriot: Indian ricegrass, black sagebrush
 Theriot: Indian ricegrass, black sagebrush, horsebrush, needleandthread
 Rock outcrop: None

Inclusion 1: Indian ricegrass, black sagebrush, galleta, needleandthread

Inclusion 2: Indian ricegrass, galleta, shadscale

Inclusion 3: Indian ricegrass, fourwing saltbush, spiny hopsage

Ecological Site

Theriot: 028AY044NV

Theriot: 028AY044NV

Rock outcrop: None

Inclusion 1: 028AY004NV

Inclusion 2: 028AY018NV

Inclusion 3: 028AY037NV

1540--Amtoft-Kyler association

Composition

Major Components

Kyler very gravelly loam, 8 to 30 percent slopes--35 percent

Amtoft very gravelly loam, 15 to 50 percent slopes--30 percent

Amtoft gravelly silt loam, 15 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Eaglepass very gravelly sandy loam, 15 to 50 percent slopes--8 percent

Inclusion 2: Rock outcrop--4 percent

Inclusion 3: Xeric Torriorthents gravelly sandy loam, 2 to 8 percent slopes--2 percent

Inclusion 4: Xeric Torriorthents very gravelly coarse sand, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Mountains

Kyler--Landform: Mountains; geomorphic position: backslope; position on slope: upper

Amtoft--Landform: Mountains; geomorphic position: backslope; position on slope: lower

Amtoft--Landform: Mountains; geomorphic position: backslope; position on slope: upper

Inclusion 1--Landform: Mountains; geomorphic position: backslope

Inclusion 2--Landform: Mountains; geomorphic position: summit

Inclusion 3--Landform: Drainageways

Inclusion 4--Landform: Drainageways

Major Component Description

Kyler Series

Elevation: 5,000 to 6,200 feet

Precipitation: About 10 inches

Air temperature: About 47 degrees

Frost-free season: About 125 days

Surface rock fragments: 5 percent cobbles; 60 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Amtoft Series

Elevation: 6,200 to 6,700 feet

Precipitation: About 10 inches

Air temperature: About 50 degrees

Frost-free season: About 120 days

Surface rock fragments: 5 percent cobbles; 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Amtoft Series

Elevation: 6,200 to 6,700 feet

Precipitation: About 10 inches

Air temperature: About 47 degrees

Frost-free season: About 125 days

Surface rock fragments: 5 percent cobbles; 60 percent gravel

Surface layer texture: Gravelly silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Kyler: Indian ricegrass, Utah juniper, black sagebrush, galleta

Amtoft: Indian ricegrass, black sagebrush, galleta, needleandthread

Amtoft: Indian ricegrass, black sagebrush, bluebunch wheatgrass, galleta

Inclusion 1: Scribner needlegrass, black sagebrush, galleta, littleleaf mountainmahogany

Inclusion 2: None

Inclusion 3: Indian ricegrass, Wyoming big sagebrush, galleta, spiny hopsage

Inclusion 4: Indian ricegrass, Nevada ephedra, big sagebrush, rubber rabbitbrush

Ecological Site

Kyler: 028AY004NV

Amtoft: 028AY027NV

Amtoft: 028AY034NV

Inclusion 1: 028AY029NV

Inclusion 2: None

Inclusion 3: 028AY028NV
Inclusion 4: 028AY038NV

1541--Kyler-Rock outcrop association

Composition

Major Components

Kyler very gravelly loam, 15 to 50 percent slopes--45 percent
Kyler very gravelly loam, 4 to 15 percent slopes--30 percent
Rock outcrop--10 percent

Contrasting Inclusions

Inclusion 1: Jericho very gravelly sandy loam, 2 to 8 percent slopes--5 percent
Inclusion 2: Xeric Torriorthents very gravelly sandy loam, 2 to 8 percent slopes--5 percent
Inclusion 3: Armespan very gravelly sandy loam, 2 to 8 percent slopes--4 percent
Inclusion 4: Typic Torriorthents, sandy-skeletal, carbonatic, mesic extremely gravelly coarse sand, 0 to 4 percent slopes--1 percent

Map Unit Setting

Landscape position: Hills
Kyler--Landform: Hills
Kyler--Landform: Hills
Rock outcrop--Landform: Hills
Inclusion 1--Landform: Fan remnants
Inclusion 2--Landform: Drainageways
Inclusion 3--Landform: Fan remnants
Inclusion 4--Landform: Drainageways

Major Component Description

Kyler Series

Elevation: 5,100 to 6,100 feet
Precipitation: About 10 inches
Air temperature: About 50 degrees
Frost-free season: About 120 days
Surface rock fragments: 5 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Kyler Series

Elevation: 5,100 to 6,100 feet
Precipitation: About 10 inches
Air temperature: About 50 degrees
Frost-free season: About 120 days

Surface rock fragments: 5 percent cobbles; 40 percent gravel
Surface layer texture: Very gravelly loam
Drainage class: Well drained
Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Rock outcrop Miscellaneous Area

Elevation: 5,100 to 6,100 feet

Dominant Present Vegetation

Kyler: Indian ricegrass, black sagebrush, galleta, needleandthread
Kyler: Indian ricegrass, black sagebrush, galleta, needleandthread
Rock outcrop: None
Inclusion 1: Indian ricegrass, black sagebrush, galleta, needleandthread
Inclusion 2: Indian ricegrass, Wyoming big sagebrush, galleta, spiny hopsage
Inclusion 3: Indian ricegrass, black sagebrush, needleandthread, spiny hopsage
Inclusion 4: Indian ricegrass, fourwing saltbush, spiny hopsage

Ecological Site

Kyler: 028AY004NV
Kyler: 028AY004NV
Rock outcrop: None
Inclusion 1: 028AY004NV
Inclusion 2: 028AY028NV
Inclusion 3: 028AY047NV
Inclusion 4: 028AY037NV

1542--Kyler-Amtoft-Jericho association

Composition

Major Components

Kyler very gravelly loam, 8 to 30 percent slopes--40 percent
Amtoft very gravelly loam, 8 to 30 percent slopes--25 percent
Jericho very gravelly loam, 2 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Xerollic Haplargids, fine, montmorillonitic, mesic gravelly loam, 8 to 30 percent slopes--9 percent
Inclusion 2: Rock outcrop--3 percent
Inclusion 3: Xeric Torriorthents extremely gravelly coarse sand, 0 to 4 percent slopes--2 percent
Inclusion 4: Xerollic Durorthids, loamy-skeletal,

carbonatic, mesic very gravelly loam, 2 to 15 percent slopes--1 percent

Map Unit Setting

Landscape position: Hills and intermontane basins

Kyler--Landform: Hills; aspect: south

Amtoft--Landform: Hills; geomorphic position: backslope; aspect: north

Jericho--Landform: Fan remnants

Inclusion 1--Landform: Hills

Inclusion 2--Landform: Hills; geomorphic position: summit

Inclusion 3--Landform: Drainageways

Inclusion 4--Landform: Fan remnants

Major Component Description

Kyler Series

Elevation: 5,600 to 7,000 feet

Precipitation: About 10 inches

Air temperature: About 50 degrees

Frost-free season: About 120 days

Surface rock fragments: 5 percent cobbles; 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Amtoft Series

Elevation: 5,600 to 7,000 feet

Precipitation: About 10 inches

Air temperature: About 47 degrees

Frost-free season: About 125 days

Surface rock fragments: 5 percent cobbles; 60 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Jericho Series

Elevation: 5,600 to 6,200 feet

Precipitation: About 8 inches

Air temperature: About 49 degrees

Frost-free season: About 120 days

Surface rock fragments: 45 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Kyler: Indian ricegrass, black sagebrush, galleta, needleandthread

Amtoft: Indian ricegrass, Utah juniper, black sagebrush, galleta

Jericho: Indian ricegrass, black sagebrush, galleta, needleandthread

Inclusion 1: Indian ricegrass, black sagebrush, galleta, needleandthread

Inclusion 2: None

Inclusion 3: Indian ricegrass, Wyoming big sagebrush, galleta, spiny hopsage

Inclusion 4: Indian ricegrass, black sagebrush, bluebunch wheatgrass

Ecological Site

Kyler: 028AY004NV

Amtoft: 028AY027NV

Jericho: 028AY013NV

Inclusion 1: 028AY004NV

Inclusion 2: None

Inclusion 3: 028AY028NV

Inclusion 4: 028AY043NV

1550--Jericho association

Composition

Major Components

Jericho very gravelly loam, 4 to 15 percent slopes--50 percent

Jericho very gravelly loam, 15 to 50 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic very gravelly loam, 8 to 30 percent slopes--5 percent

Inclusion 2: Xerollic Calciorthids, loamy-skeletal, carbonatic, mesic gravelly sandy loam, 2 to 8 percent slopes--5 percent

Inclusion 3: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic very gravelly sandy loam, 15 to 50 percent slopes--3 percent

Inclusion 4: Xerollic Durorthids, loamy-skeletal, carbonatic, mesic very gravelly sandy loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Jericho--Landform: Fan remnants

Jericho--Landform: Fan remnants; geomorphic position: backslope

Inclusion 1--Landform: Fan remnants; geomorphic position: backslope; aspect: north

Inclusion 2--Landform: Fan remnants; geomorphic

position: backslope
 Inclusion 3--Landform: Fan remnants; geomorphic
 position: backslope
 Inclusion 4--Landform: Fan remnants

Major Component Description

Jericho Series

Elevation: 5,600 to 6,400 feet
 Precipitation: About 8 inches
 Air temperature: About 49 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 45 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed
 rocks

Jericho Series

Elevation: 5,600 to 6,400 feet
 Precipitation: About 8 inches
 Air temperature: About 49 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 45 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed
 rocks

Dominant Present Vegetation

Jericho: Indian ricegrass, black sagebrush, galleta,
 needleandthread
 Jericho: Indian ricegrass, black sagebrush, galleta,
 needleandthread
 Inclusion 1: Indian ricegrass, black sagebrush,
 bluebunch wheatgrass, galleta
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush,
 galleta, needleandthread
 Inclusion 3: Indian ricegrass, Utah juniper, black
 sagebrush, galleta
 Inclusion 4: Indian ricegrass, Wyoming big
 sagebrush, galleta, spiny hopsage

Ecological Site

Jericho: 028AY013NV
 Jericho: 028AY004NV
 Inclusion 1: 028AY034NV
 Inclusion 2: 028AY015NV
 Inclusion 3: 028AY027NV
 Inclusion 4: 028AY028NV

1560--Toano-Timpie association

Composition

Major Components

Toano very fine sandy loam, 0 to 2 percent slopes--65
 percent

Timpie very fine sandy loam, 0 to 2 percent slopes--25
 percent

Contrasting Inclusions

Inclusion 1: Typic Torripsamments, mixed, mesic loamy
 fine sand, 2 to 4 percent slopes--7 percent
 Inclusion 2: Typic Torriorthents, loamy-skeletal, mixed
 (calcareous), mesic gravelly sandy loam, 2 to 4 percent
 slopes--2 percent
 Inclusion 3: Typic Torriorthents, loamy-skeletal, mixed
 (calcareous), mesic very gravelly sandy loam, 0 to 4
 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Toano--Landform: Inset fans
 Timpie--Landform: Inset fans
 Inclusion 1--Landform: Fan aprons
 Inclusion 2--Landform: Fan aprons
 Inclusion 3--Landform: Inset fans

Major Component Description

Toano Series

Elevation: 5,300 to 5,700 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 115 days
 Surface layer texture: Very fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed
 rocks, loess and volcanic ash

Timpie Series

Elevation: 5,300 to 5,700 feet
 Precipitation: About 7 inches
 Air temperature: About 49 degrees
 Frost-free season: About 130 days
 Surface layer texture: Very fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed
 rocks and lacustrine sediments

Dominant Present Vegetation

Toano: Indian ricegrass, winterfat
 Timpie: Indian ricegrass, sickle saltbush, western
 wheatgrass
 Inclusion 1: Indian ricegrass, fourwing saltbush,
 needleandthread, winterfat
 Inclusion 2: Indian ricegrass, galleta, shadscale
 Inclusion 3: Indian ricegrass, black greasewood, spiny
 hopsage

Ecological Site

Toano: 028AY030NV

Timpie: 028AY033NV
 Inclusion 1: 028AY019NV
 Inclusion 2: 028AY018NV
 Inclusion 3: 028AY032NV

1570--Jericho-Xeric Torriorthents association

Composition

Major Components

Jericho very gravelly loam, 2 to 8 percent slopes--50 percent
 Xeric Torriorthents gravelly sandy loam, 8 to 30 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Armespan very gravelly sandy loam, 8 to 30 percent slopes--5 percent
 Inclusion 2: Lithic Xeric Torriorthents, loamy-skeletal, mixed, nonacid, mesic gravelly sandy loam, 4 to 15 percent slopes--4 percent
 Inclusion 3: Xeric Torriorthents gravelly sandy loam, 2 to 8 percent slopes--4 percent
 Inclusion 4: Xerollic Durorthids, loamy, mixed, mesic, shallow gravelly sandy loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Jericho--Landform: Fan remnants
 Xeric Torriorthents--Landform: Fan remnants;
 geomorphic position: backslope
 Inclusion 1--Landform: Fan remnants; geomorphic position: backslope
 Inclusion 2--Landform: Pediments
 Inclusion 3--Landform: Inset fans
 Inclusion 4--Landform: Fan remnants

Major Component Description

Jericho Series

Elevation: 5,300 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 49 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 45 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Xeric Torriorthents Miscellaneous Area

Elevation: 5,300 to 6,200 feet

Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent cobbles; 45 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Jericho: Indian ricegrass, black sagebrush, galleta, needleandthread
 Xeric Torriorthents: Indian ricegrass, Utah juniper, black sagebrush
 Inclusion 1: Indian ricegrass, black sagebrush, galleta, needleandthread
 Inclusion 2: Indian ricegrass, black sagebrush, galleta, needleandthread
 Inclusion 3: Indian ricegrass, Wyoming big sagebrush, galleta, spiny hopsage
 Inclusion 4: Indian ricegrass, needleandthread, pigmy sagebrush

Ecological Site

Jericho: 028AY004NV
 Xeric Torriorthents: 028BY041NV
 Inclusion 1: 028AY004NV
 Inclusion 2: 028AY004NV
 Inclusion 3: 028AY028NV
 Inclusion 4: 028AY007NV

1580--Armespan-Jericho association

Composition

Major Components

Armespan very gravelly sandy loam, 2 to 8 percent slopes--55 percent
 Jericho very gravelly loam, 2 to 8 percent slopes--30 percent

Contrasting Inclusions

Inclusion 1: Izamatch gravelly sandy loam, 2 to 4 percent slopes--7 percent
 Inclusion 2: Xeric Torriorthents gravelly loamy sand, 2 to 8 percent slopes--3 percent
 Inclusion 3: Xeric Torriorthents very gravelly coarse sand, 2 to 8 percent slopes--3 percent
 Inclusion 4: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic gravelly sandy loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
 Armespan--Landform: Fan remnants

Jericho--Landform: Fan remnants
 Inclusion 1--Landform: Barrier beaches
 Inclusion 2--Landform: Inset fans
 Inclusion 3--Landform: Inset fans
 Inclusion 4--Landform: Fan remnants; geomorphic position: backslope; position on slope: lower

Major Component Description

Armespan Series

Elevation: 5,200 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 52 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Jericho Series

Elevation: 5,200 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 49 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 45 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Armespan: Indian ricegrass, black sagebrush, galleta, needleandthread
 Jericho: Indian ricegrass, black sagebrush, galleta, needleandthread
 Inclusion 1: Indian ricegrass, galleta, shadscale
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, galleta, spiny hopsage
 Inclusion 3: Indian ricegrass, Nevada ephedra, big sagebrush, rubber rabbitbrush
 Inclusion 4: Indian ricegrass, Wyoming big sagebrush, galleta, needleandthread

Ecological Site

Armespan: 028AY004NV
 Jericho: 028AY004NV
 Inclusion 1: 028AY018NV
 Inclusion 2: 028AY028NV
 Inclusion 3: 028AY038NV
 Inclusion 4: 028AY015NV

1581--Armespan-Kyler-Heist association

Composition

Major Components

Armespan very gravelly sandy loam, 2 to 8 percent slopes--45 percent
 Kyler very gravelly loam, 8 to 30 percent slopes--25 percent
 Heist fine sandy loam, 2 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Amtoft very gravelly loam, 8 to 30 percent slopes--7 percent
 Inclusion 2: Durixerollic Calciorthids, coarse-loamy, mixed, mesic loam, 2 to 4 percent slopes--6 percent
 Inclusion 3: Durixerollic Calciorthids, loamy-skeletal, mixed, mesic gravelly sandy loam, 2 to 4 percent slopes--1 percent
 Inclusion 4: Xeric Torriorthents gravelly sandy loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
 Armespan--Landform: Fan remnants
 Kyler--Landform: Hills; geomorphic position: backslope
 Heist--Landform: Drainageways
 Inclusion 1--Landform: Hills; geomorphic position: backslope
 Inclusion 2--Landform: Fan remnants
 Inclusion 3--Landform: Fan remnants
 Inclusion 4--Landform: Inset fans

Major Component Description

Armespan Series

Elevation: 5,200 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 52 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Kyler Series

Elevation: 5,800 to 6,200 feet
 Precipitation: About 10 inches
 Air temperature: About 50 degrees
 Frost-free season: About 120 days
 Surface rock fragments: 5 percent cobbles; 40 percent gravel
 Surface layer texture: Very gravelly loam

Drainage class: Well drained
 Dominant parent material: Residuum and colluvium
 derived from limestone and dolomite

Heist Series

Elevation: 5,200 to 6,200 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 35 percent gravel
 Surface layer texture: Fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed
 rocks

Dominant Present Vegetation

Armespan: Indian ricegrass, black sagebrush, galleta,
 needleandthread
 Kyler: Indian ricegrass, black sagebrush, galleta,
 needleandthread
 Heist: Indian ricegrass, winterfat
 Inclusion 1: Indian ricegrass, Utah juniper, black
 sagebrush, galleta
 Inclusion 2: Indian ricegrass, black sagebrush,
 needleandthread, spiny hopsage
 Inclusion 3: Indian ricegrass, needleandthread, pigmy
 sagebrush
 Inclusion 4: Indian ricegrass, Wyoming big sagebrush,
 galleta, spiny hopsage

Ecological Site

Armespan: 028AY004NV
 Kyler: 028AY004NV
 Heist: 028BY084NV
 Inclusion 1: 028AY027NV
 Inclusion 2: 028AY047NV
 Inclusion 3: 028AY007NV
 Inclusion 4: 028AY028NV

1582--Armespan-Xeric Torriorthents association

Composition

Major Components

Armespan very gravelly sandy loam, 2 to 8 percent
 slopes--50 percent
 Xeric Torriorthents gravelly sandy loam, 8 to 30 percent
 slopes--35 percent

Contrasting Inclusions

Inclusion 1: Armespan gravelly loam, 8 to 30 percent
 slopes--5 percent

Inclusion 2: Lithic Xeric Torriorthents, coarse-loamy,
 mixed, nonacid, mesic gravelly loam, 4 to 15 percent
 slopes--4 percent

Inclusion 3: Xerollic Calciorthids, loamy-skeletal, mixed,
 mesic gravelly sandy loam, 2 to 8 percent slopes--4
 percent

Inclusion 4: Xeric Torriorthents gravelly sandy loam, 2
 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Armespan--Landform: Fan remnants
 Xeric Torriorthents--Landform: Fan remnants;
 geomorphic position: backslope
 Inclusion 1--Landform: Fan remnants; geomorphic
 position: backslope
 Inclusion 2--Landform: Pediments
 Inclusion 3--Landform: Inset fans
 Inclusion 4--Landform: Fan remnants

Major Component Description

Armespan Series

Elevation: 5,300 to 5,700 feet
 Precipitation: About 8 inches
 Air temperature: About 52 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed
 rocks

Xeric Torriorthents Series

Elevation: 5,300 to 5,700 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent cobbles; 45 percent
 gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from mixed
 rocks

Dominant Present Vegetation

Armespan: Indian ricegrass, black sagebrush, galleta,
 needleandthread
 Xeric Torriorthents: Indian ricegrass, Utah juniper,
 black sagebrush
 Inclusion 1: Indian ricegrass, black sagebrush, galleta,
 needleandthread
 Inclusion 2: Indian ricegrass, black sagebrush, galleta,
 needleandthread

Inclusion 3: Indian ricegrass, Wyoming big sagebrush, galleta, spiny hopsage

Inclusion 4: Indian ricegrass, Utah juniper, black sagebrush

Ecological Site

Armespan: 028AY004NV

Xeric Torriorthents: 028BY041NV

Inclusion 1: 028AY004NV

Inclusion 2: 028AY004NV

Inclusion 3: 028AY028NV

Inclusion 4: 028AY041NV

1590--Luning-Loray association

Composition

Major Components

Luning gravelly sandy loam, 2 to 8 percent slopes--45 percent

Luning gravelly loamy sand, 2 to 8 percent slopes--25 percent

Loray gravelly loam, 2 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Xeric Torriorthents extremely gravelly coarse sandy loam, 8 to 30 percent slopes--5 percent

Inclusion 2: Izamatch very gravelly sandy loam, 2 to 8 percent slopes--5 percent

Inclusion 3: Typic Torriorthents, sandy-skeletal, mixed, mesic extremely gravelly coarse sand, 2 to 8 percent slopes--3 percent

Inclusion 4: Toano silt loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins

Luning--Landform: Barrier beaches

Luning--Landform: Barrier beaches

Loray--Landform: Barrier beaches

Inclusion 1--Landform: Barrier beaches

Inclusion 2--Landform: Barrier beaches

Inclusion 3--Landform: Drainageways

Inclusion 4--Landform: Inset fans

Major Component Description

Luning Series

Elevation: 4,500 to 5,200 feet

Precipitation: About 5 inches

Air temperature: About 52 degrees

Frost-free season: About 130 days

Surface rock fragments: 10 percent gravel

Surface layer texture: Gravelly sandy loam

Drainage class: Somewhat excessively drained

Dominant parent material: Alluvium derived from mixed rocks

Luning Series

Elevation: 4,500 to 5,200 feet

Precipitation: About 5 inches

Air temperature: About 52 degrees

Frost-free season: About 130 days

Surface rock fragments: 10 percent gravel

Surface layer texture: Gravelly loamy sand

Drainage class: Somewhat excessively drained

Dominant parent material: Alluvium derived from mixed rocks

Loray Series

Elevation: 4,500 to 5,200 feet

Precipitation: About 6 inches

Air temperature: About 50 degrees

Frost-free season: About 110 days

Surface rock fragments: 40 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Somewhat excessively drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Luning: Indian ricegrass, galleta, shadscale

Luning: Indian ricegrass, galleta, horsebrush, shadscale

Loray: Indian ricegrass, bud sagebrush, galleta, shadscale

Inclusion 1: Indian ricegrass, Utah juniper, black sagebrush

Inclusion 2: Indian ricegrass, galleta, shadscale

Inclusion 3: Indian ricegrass, fourwing saltbush, spiny hopsage

Inclusion 4: Indian ricegrass, winterfat

Ecological Site

Luning: 028AY018NV

Luning: 028AY014NV

Loray: 028AY012NV

Inclusion 1: 028AY041NV

Inclusion 2: 028AY018NV

Inclusion 3: 028AY037NV

Inclusion 4: 028AY030NV

1591--Luning-Izamatch-Badland association***Composition*****Major Components**

Luning sandy loam, 2 to 4 percent slopes--35 percent
 Izamatch very gravelly sandy loam, 2 to 8 percent slopes--30 percent
 Badland variable, 4 to 30 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Xeric Torriorthents very gravelly coarse sandy loam, 4 to 15 percent slopes--8 percent
 Inclusion 2: Loray gravelly sandy loam, 4 to 15 percent slopes--3 percent
 Inclusion 3: Typic Torriorthents, coarse-loamy, mixed (calcareous), mesic sandy loam, 2 to 8 percent slopes--3 percent
 Inclusion 4: Rock outcrop--1 percent

Map Unit Setting

Landscape position: Intermontane basins
 Luning--Landform: Barrier beaches
 Izamatch--Landform: Barrier beaches
 Badland--Landform: Fan remnants
 Inclusion 1--Landform: Drainageways
 Inclusion 2--Landform: Barrier beaches
 Inclusion 3--Landform: Barrier beaches
 Inclusion 4--Landform: Hills

Major Component Description**Luning Series**

Elevation: 4,400 to 5,200 feet
 Precipitation: About 5 inches
 Air temperature: About 52 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Sandy loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from mixed rocks

Izamatch Series

Elevation: 4,400 to 5,200 feet
 Precipitation: About 6 inches
 Air temperature: About 52 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 50 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Badland Miscellaneous Area

Elevation: 4,400 to 5,200 feet

Surface layer texture: Variable
 Drainage class: Well drained

Dominant Present Vegetation

Luning: Indian ricegrass, galleta, shadscale
 Izamatch: Indian ricegrass, galleta, horsebrush, shadscale
 Badland: None
 Inclusion 1: Indian ricegrass, black sagebrush, galleta, needleandthread
 Inclusion 2: Indian ricegrass, bud sagebrush, galleta, shadscale
 Inclusion 3: Indian ricegrass, galleta, winterfat
 Inclusion 4: None

Ecological Site

Luning: 028AY018NV
 Izamatch: 028AY014NV
 Badland: None
 Inclusion 1: 028AY004NV
 Inclusion 2: 028AY012NV
 Inclusion 3: 028AY002NV
 Inclusion 4: None

1600--Eaglepass-Amtoft association***Composition*****Major Components**

Eaglepass very gravelly sandy loam, 8 to 30 percent slopes--50 percent
 Amtoft very gravelly loam, 15 to 50 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Kyler very gravelly loam, 8 to 30 percent slopes--7 percent
 Inclusion 2: Rock outcrop--6 percent
 Inclusion 3: Durorthidic Xeric Torriorthents, loamy-skeletal, mixed, mesic gravelly sandy loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Mountains
 Eaglepass--Landform: Mountains; shape of slope: convex
 Amtoft--Landform: Mountains; geomorphic position: summit; position on slope: upper; shape of slope: convex
 Inclusion 1--Landform: Mountains
 Inclusion 2--Landform: Mountains; geomorphic position: summit
 Inclusion 3--Landform: Drainageways

Major Component Description**Eaglepass Series**

Elevation: 6,000 to 6,700 feet
 Precipitation: About 8 inches
 Air temperature: About 50 degrees
 Frost-free season: About 125 days
 Surface rock fragments: 10 percent cobbles; 30 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Amtoft Series

Elevation: 6,000 to 6,700 feet
 Precipitation: About 10 inches
 Air temperature: About 47 degrees
 Frost-free season: About 125 days
 Surface rock fragments: 5 percent cobbles; 60 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Eaglepass: Scribner needlegrass, black sagebrush, galleta, littleleaf mountainmahogany
 Amtoft: Indian ricegrass, black sagebrush, bluebunch wheatgrass, galleta
 Inclusion 1: Indian ricegrass, black sagebrush, galleta, needleandthread
 Inclusion 2: None
 Inclusion 3: Indian ricegrass, Wyoming big sagebrush, galleta, spiny hopsage

Ecological Site

Eaglepass: 028AY029NV
 Amtoft: 028AY034NV
 Inclusion 1: 028AY004NV
 Inclusion 2: None
 Inclusion 3: 028AY028NV

1610--Xeric Torriorthents-Armespan-Badland association**Composition****Major Components**

Xeric Torriorthents gravelly sandy loam, 8 to 30 percent slopes--45 percent
 Armespan very gravelly sandy loam, 2 to 8 percent slopes--25 percent

Badland weathered bedrock, 8 to 75 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Xeric Torriorthents gravelly sandy loam, 2 to 4 percent slopes--5 percent
 Inclusion 2: Xeric Torripsamments, mixed, mesic loamy fine sand, 2 to 4 percent slopes--4 percent
 Inclusion 3: Izamatch gravelly sandy loam, 2 to 8 percent slopes--4 percent
 Inclusion 4: Typic Torripsamments, mixed, mesic loamy sand, 2 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Xeric Torriorthents--Landform: Fan remnants; geomorphic position: backslope
 Armespan--Landform: Fan remnants; geomorphic position: summit
 Badland--Landform: Fan remnants
 Inclusion 1--Landform: Inset fans
 Inclusion 2--Landform: Sand sheets
 Inclusion 3--Landform: Barrier beaches
 Inclusion 4--Landform: Drainageways

Major Component Description**Xeric Torriorthents Soils**

Elevation: 5,500 to 6,000 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent cobbles; 45 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from mixed rocks

Armespan Series

Elevation: 5,500 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 52 degrees
 Frost-free season: About 130 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Badland Miscellaneous Area

Elevation: 5,500 to 6,000 feet
 Surface layer texture: Weathered bedrock
 Drainage class: Well drained

Dominant Present Vegetation

Xeric Torriorthents: Indian ricegrass, Utah juniper, black sagebrush

Armespan: Indian ricegrass, black sagebrush, galleta, needleandthread

Badland: None

Inclusion 1: Indian ricegrass, Wyoming big sagebrush, galleta, spiny hopsage

Inclusion 2: Indian ricegrass, Wyoming big sagebrush, fourwing saltbush, needleandthread

Inclusion 3: Indian ricegrass, galleta, horsebrush, shadscale

Inclusion 4: Indian ricegrass, black greasewood, spiny hopsage

Ecological Site

Xeric Torriorthents: 028BY041NV

Armespan: 028AY004NV

Badland: None

Inclusion 1: 028AY028NV

Inclusion 2: 028AY005NV

Inclusion 3: 028AY014NV

Inclusion 4: 028AY032NV

1620--Kolda-Duffer-Sonoma association***Composition*****Major Components**

Kolda silt loam, 0 to 1 percent slopes--55 percent

Duffer silt loam, 0 to 2 percent slopes--20 percent

Sonoma silty clay loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Umlerland silty clay, 0 to 2 percent slopes--7 percent

Inclusion 2: Aeric Halaquepts, fine-silty, mixed (calcareous), mesic silty clay loam, 0 to 2 percent slopes--2 percent

Inclusion 3: Cumulic Endoaquolls, fine-silty, mixed (calcareous), mesic silt loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins

Kolda--Landform: Lake plains

Duffer--Landform: Lake plains

Sonoma--Landform: Lake plains

Inclusion 1--Landform: Lake plains

Inclusion 2--Landform: Lake plains

Inclusion 3--Landform: Lake plains

Major Component Description**Kolda Series**

Elevation: 5,600 to 5,700 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Very poorly drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Duffer Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Poorly drained

Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Sonoma Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 8 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface layer texture: Silty clay loam

Drainage class: Poorly drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Kolda: Cattail

Duffer: Alkali cordgrass, alkali sacaton, inland saltgrass

Sonoma: Bluejoint reedgrass

Inclusion 1: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Inclusion 2: Bluegrass, foxtail barley, inland saltgrass, rush, sedge

Inclusion 3: Bluegrass, rush, sedge

Ecological Site

Kolda: 028BY044NV

Duffer: 028BY002NV

Sonoma: 028BY099NV

Inclusion 1: 028BY004NV

Inclusion 2: 028BY098NV

Inclusion 3: 028BY001NV

1621--Kolda-Rubylake association***Composition*****Major Components**

Kolda silt loam, 0 to 1 percent slopes--40 percent
 Rubylake clay loam, 0 to 2 percent slopes--30 percent
 Kolda silt loam, wet, 0 to 1 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Playas silty clay, 0 to 1 percent slopes--5 percent
 Inclusion 2: Umlerland silty clay, 0 to 1 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins

Kolda--Landform: Lake plains
 Rubylake--Landform: Lake terraces
 Kolda--Landform: Lake plains
 Inclusion 1--Landform: Lake plains
 Inclusion 2--Landform: Lake plains

Major Component Description**Kolda Series**

Elevation: 6,000 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Very poorly drained
 Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Rubylake Series

Elevation: 6,000 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Clay loam
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Kolda Series

Elevation: 6,000 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Very poorly drained
 Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

Kolda: Cattail

Rubylake: Alkali cordgrass, alkali sacaton, inland saltgrass

Kolda: Cattail

Inclusion 1: None

Inclusion 2: Bluegrass, foxtail barley, inland saltgrass, rush, sedge

Ecological Site

Kolda: 028BY044NV

Rubylake: 028BY002NV

Kolda: 028BY044NV

Inclusion 1: None

Inclusion 2: 028BY098NV

1622--Kolda silt loam, 0 to 1 percent slopes***Composition*****Major Components**

Kolda silt loam, 0 to 1 percent slopes--90 percent

Contrasting Inclusions

Inclusion 1: Rubylake silt loam, 0 to 2 percent slopes--5 percent
 Inclusion 2: Wendane silt loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins

Kolda--Landform: Lake plains
 Inclusion 1--Landform: Lake terraces
 Inclusion 2--Landform: Lake terraces

Major Component Description**Kolda Series**

Elevation: 6,000 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Very poorly drained
 Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

Kolda: Cattail

Inclusion 1: Inland saltgrass, sedge, western wheatgrass

Inclusion 2: Alkali cordgrass, alkali sacaton

Ecological Site

Kolda: 028BY044NV

Inclusion 1: 028BY012NV

Inclusion 2: 028BY002NV

1623--Kolda-Water association***Composition*****Major Components**

Kolda silt loam, 0 to 1 percent slopes--75 percent

Water--15 percent

Contrasting Inclusions

Inclusion 1: Rubylake silt loam, 0 to 2 percent slopes--5 percent

Inclusion 2: Wendane silt loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins

Kolda--Landform: Lake plains

Water--Landform: Depressions

Inclusion 1--Landform: Lake terraces

Inclusion 2--Landform: Lake terraces

Major Component Description**Kolda Series**

Elevation: 6,000 to 6,100 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Very poorly drained

Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Water Miscellaneous Area

Elevation: 6,000 to 6,100 feet

Dominant Present Vegetation

Kolda: Cattail

Water: None

Inclusion 1: Inland saltgrass, sedge, western wheatgrass

Inclusion 2: Alkali cordgrass, alkali sacaton, inland saltgrass

Ecological Site

Kolda: 028BY044NV

Water: None

Inclusion 1: 028BY012NV

Inclusion 2: 028BY002NV

1630--Pookaloo-Cavehill, cool-Rock outcrop association***Composition*****Major Components**

Pookaloo very gravelly loam, 15 to 50 percent slopes--40 percent

Cavehill very gravelly silt loam, cool, 15 to 50 percent slopes--30 percent

Rock outcrop--15 percent

Contrasting Inclusions

Inclusion 1: Haunchee very stony loam, 15 to 50 percent slopes--8 percent

Inclusion 2: Lithic Haploxerolls, loamy-skeletal, mixed, mesic very gravelly loam, 15 to 50 percent slopes--7 percent

Map Unit Setting

Landscape position: Mountains

Pookaloo--Landform: Mountains; geomorphic position: backslope; aspect: south

Cavehill--Landform: Mountains; geomorphic position: backslope; aspect: north

Rock outcrop--Landform: Mountains

Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: upper

Inclusion 2--Landform: Mountains; geomorphic position: backslope

Major Component Description**Pookaloo Series**

Elevation: 6,800 to 8,200 feet

Precipitation: About 12 inches

Air temperature: About 46 degrees

Frost-free season: About 100 days

Surface rock fragments: 50 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Cavehill Series

Elevation: 6,800 to 8,200 feet

Precipitation: About 14 inches

Air temperature: About 44 degrees

Frost-free season: About 80 days

Surface rock fragments: 20 percent gravel

Surface layer texture: Very gravelly silt loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Rock outcrop Miscellaneous Area

Elevation: 6,800 to 8,200 feet

Dominant Present Vegetation

Pookaloo: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon

Cavehill: Utah juniper, Wyoming big sagebrush, bluebunch wheatgrass, singleleaf pinyon

Rock outcrop: None
 Inclusion 1: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush
 Inclusion 2: Utah juniper, bluebunch wheatgrass, mountain big sagebrush, singleleaf pinyon

Ecological Site

Pookaloo: 028BY060NV
 Cavehill: 028BY061NV
 Rock outcrop: None
 Inclusion 1: 025XY071NV
 Inclusion 2: 028BY062NV

1631--Pookaloo-Tecomar-Wardbay association

Composition

Major Components

Pookaloo very gravelly loam, 15 to 50 percent slopes--35 percent
 Tecomar extremely gravelly loam, 15 to 50 percent slopes--30 percent
 Wardbay very gravelly loam, 15 to 50 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Cavehill very gravelly loam, 15 to 50 percent slopes--7 percent
 Inclusion 2: Rock outcrop--5 percent
 Inclusion 3: Pachic Haploxerolls, loamy-skeletal, mixed, frigid silt loam, 2 to 8 percent slopes--3 percent

Map Unit Setting

Landscape position: Mountains and foothills
 Pookaloo--Landform: Hills; geomorphic position: backslope; aspect: north
 Tecomar--Landform: Hills; geomorphic position: backslope
 Wardbay--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north
 Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: upper; aspect: north
 Inclusion 2--Landform: Mountains; geomorphic position: summit
 Inclusion 3--Landform: Mountains; geomorphic position: backslope; shape of slope: concave

Major Component Description

Pookaloo Series

Elevation: 6,800 to 7,600 feet
 Precipitation: About 12 inches
 Air temperature: About 46 degrees

Frost-free season: About 100 days
 Surface rock fragments: 50 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Tecomar Series

Elevation: 6,800 to 7,600 feet
 Precipitation: About 12 inches
 Air temperature: About 46 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 5 percent cobbles; 60 percent gravel
 Surface layer texture: Extremely gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Wardbay Series

Elevation: 6,800 to 7,600 feet
 Precipitation: About 18 inches
 Air temperature: About 42 degrees
 Frost-free season: About 80 days
 Surface rock fragments: 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Pookaloo: Utah juniper, black sagebrush, bluebunch wheatgrass, singleleaf pinyon
 Tecomar: Indian ricegrass, black sagebrush, bluebunch wheatgrass
 Wardbay: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
 Inclusion 1: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush, singleleaf pinyon
 Inclusion 2: None
 Inclusion 3: Basin big sagebrush

Ecological Site

Pookaloo: 028BY060NV
 Tecomar: 028BY008NV
 Wardbay: 025XY012NV
 Inclusion 1: 028BY058NV
 Inclusion 2: None
 Inclusion 3: 025XY003NV

1640--Jungo association***Composition*****Major Components**

Jungo very gravelly loam, 15 to 50 percent slopes--55 percent

Jungo very gravelly loam, 4 to 15 percent slopes--30 percent

Contrasting Inclusions

Inclusion 1: Armespan very gravelly loam, 2 to 8 percent slopes--7 percent

Inclusion 2: Xeric Torriorthents extremely gravelly coarse sand, 0 to 2 percent slopes--4 percent

Inclusion 3: Kyler very gravelly loam, 8 to 50 percent slopes--2 percent

Inclusion 4: Xerollic Haplargids, loamy-skeletal, mixed, mesic very gravelly loam, 4 to 15 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Jungo--Landform: Ballenas; geomorphic position: backslope

Jungo--Landform: Ballenas; geomorphic position: summit

Inclusion 1--Landform: Ballenas; geomorphic position: backslope; position on slope: lower

Inclusion 2--Landform: Inset fans

Inclusion 3--Landform: Hills

Inclusion 4--Landform: Ballenas; geomorphic position: backslope

Major Component Description**Jungo Series**

Elevation: 5,200 to 6,200 feet

Precipitation: About 8 inches

Air temperature: About 51 degrees

Frost-free season: About 120 days

Surface rock fragments: 5 percent cobbles; 70 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Jungo Series

Elevation: 5,200 to 6,200 feet

Precipitation: About 8 inches

Air temperature: About 51 degrees

Frost-free season: About 120 days

Surface rock fragments: 1 percent stones and boulders; 5 percent cobbles; 70 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Jungo: Indian ricegrass, black sagebrush, galleta, needleandthread

Jungo: Indian ricegrass, black sagebrush, galleta, needleandthread

Inclusion 1: Indian ricegrass, black sagebrush, galleta, needleandthread

Inclusion 2: Indian ricegrass, Nevada ephedra, big sagebrush, rubber rabbitbrush

Inclusion 3: Indian ricegrass, black sagebrush, galleta, needleandthread

Inclusion 4: Indian ricegrass, Utah juniper, black sagebrush, galleta

Ecological Site

Jungo: 028AY004NV

Jungo: 028AY013NV

Inclusion 1: 028AY013NV

Inclusion 2: 028AY038NV

Inclusion 3: 028AY004NV

Inclusion 4: 028AY027NV

1650--Shantown-Zorravista association***Composition*****Major Components**

Shantown gravelly loamy sand, 2 to 8 percent slopes--65 percent

Zorravista loamy fine sand, 2 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Threesee very gravelly sandy loam, 2 to 8 percent slopes--5 percent

Inclusion 2: Aridic Haploxerolls, sandy-skeletal over loamy, mixed, mesic sandy clay loam, 2 to 8 percent slopes--5 percent

Inclusion 3: Xeric Torriorthents gravelly sandy clay loam, 2 to 8 percent slopes--3 percent

Inclusion 4: Shantown gravelly sandy clay loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins

Shantown--Landform: Longshore bars (relict)

Zorravista--Landform: Sand sheets; aspect: north

Inclusion 1--Landform: Spits

Inclusion 2--Landform: Spits

Inclusion 3--Landform: Spits

Inclusion 4--Landform: Spits

Major Component Description

Shantown Series

Elevation: 6,000 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly loamy sand
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from granitic rocks

Zorravista Series

Elevation: 6,000 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 48 degrees
 Frost-free season: About 115 days
 Surface layer texture: Loamy fine sand
 Drainage class: Excessively drained
 Dominant parent material: Eolian material

Dominant Present Vegetation

Shantown: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Zorravista: Indian ricegrass, big sagebrush, needleandthread, thickspike wheatgrass
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 2: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 3: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Inclusion 4: Thurber needlegrass, big sagebrush, bluebunch wheatgrass

Ecological Site

Shantown: 028BY010NV
 Zorravista: 028BY005NV
 Inclusion 1: 028BY010NV
 Inclusion 2: 028BY010NV
 Inclusion 3: 028BY010NV
 Inclusion 4: 028BY007NV

1651--Shantown association

Composition

Major Components

Shantown gravelly loamy sand, 2 to 8 percent slopes--55 percent

Shantown gravelly loamy sand, moist, 2 to 8 percent slopes--30 percent

Contrasting Inclusions

Inclusion 1: Durixerollic Camborthids, coarse-loamy, mixed, mesic coarse sandy loam, 2 to 8 percent slopes--8 percent
 Inclusion 2: Idway sandy loam, 2 to 4 percent slopes--7 percent

Map Unit Setting

Landscape position: Intermontane basins
 Shantown--Landform: Longshore bars (relict)
 Shantown--Landform: Longshore bars (relict)
 Inclusion 1--Landform: Longshore bars (relict)
 Inclusion 2--Landform: Longshore bars (relict)

Major Component Description

Shantown Series

Elevation: 6,000 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly loamy sand
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from granitic rocks

Shantown Series

Elevation: 6,000 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly loamy sand
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from granitic rocks

Dominant Present Vegetation

Shantown: Indian ricegrass, Wyoming big sagebrush, needleandthread
 Shantown: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
 Inclusion 1: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Inclusion 2: Basin wildrye, big sagebrush, black greasewood

Ecological Site

Shantown: 028BY010NV
 Shantown: 028BY007NV
 Inclusion 1: 028BY004NV
 Inclusion 2: 028BY028NV

1660--Wendane-Logan association***Composition*****Major Components**

Wendane silt loam, 0 to 4 percent slopes--45 percent
 Logan silt loam, 0 to 2 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Typic Haplaquolls, fine, montmorillonitic (calcareous), mesic silt loam, 0 to 2 percent slopes--5 percent
 Inclusion 2: Wendane silt loam, 0 to 4 percent slopes--5 percent
 Inclusion 3: Kolda silt loam, 0 to 1 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
 Wendane--Landform: Lake terraces
 Logan--Landform: Flood plains
 Inclusion 1--Landform: Flood plains
 Inclusion 2--Landform: Lake terraces
 Inclusion 3--Landform: Lake plains

Major Component Description**Wendane Series**

Elevation: 5,600 to 6,100 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Somewhat poorly drained
 Dominant parent material: Alluvium derived from mixed rocks

Logan Series

Elevation: 5,600 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface layer texture: Silt loam
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Dominant Present Vegetation

Wendane: Alkali cordgrass, alkali sacaton, inland saltgrass
 Logan: Alkali sacaton, bluegrass, mat muhly
 Inclusion 1: Bluegrass, rush, sedge
 Inclusion 2: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Inclusion 3: Cattail

Ecological Site

Wendane: 028BY002NV
 Logan: 028BY100NV
 Inclusion 1: 028BY001NV
 Inclusion 2: 028BY004NV
 Inclusion 3: 028BY044NV

1670--Wendane-Logan-Wendane, occasionally flooded association***Composition*****Major Components**

Wendane silt loam, 0 to 4 percent slopes--45 percent
 Logan silt loam, 0 to 2 percent slopes--25 percent
 Wendane silt loam, 0 to 4 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Playas silty clay, 0 to 1 percent slopes--5 percent
 Inclusion 2: Benin silty clay, 0 to 2 percent slopes--5 percent
 Inclusion 3: Umberland silty clay, 0 to 2 percent slopes--3 percent
 Inclusion 4: Typic Calciaquolls, fine-loamy, mesic silt loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
 Wendane--Landform: Lake terraces
 Logan--Landform: Flood plains
 Wendane--Landform: Lake terraces
 Inclusion 1--Landform: Lake plains
 Inclusion 2--Landform: Lake plains
 Inclusion 3--Landform: Lake plains
 Inclusion 4--Landform: Flood plains

Major Component Description**Wendane Series**

Elevation: 5,600 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Somewhat poorly drained
 Dominant parent material: Alluvium derived from mixed rocks

Logan Series

Elevation: 5,600 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface layer texture: Silt loam

Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Wendane Series

Elevation: 5,600 to 6,100 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Somewhat poorly drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Wendane: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Logan: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Wendane: Alkali cordgrass, alkali sacaton, inland saltgrass
 Inclusion 1: None
 Inclusion 2: Basin wildrye, black greasewood, inland saltgrass
 Inclusion 3: Bluegrass, foxtail barley, inland saltgrass, rush, sedge
 Inclusion 4: Alkali sacaton, basin big sagebrush, basin wildrye, mat muhly, rubber rabbitbrush

Ecological Site

Wendane: 028BY004NV
 Logan: 028BY100NV
 Wendane: 028BY002NV
 Inclusion 1: None
 Inclusion 2: 028BY069NV
 Inclusion 3: 028BY098NV
 Inclusion 4: 028BY031NV

1680--Rubylake-Kolda-Wendane association

Composition

Major Components

Rubylake clay loam, 2 to 4 percent slopes--35 percent
 Kolda silt loam, 0 to 2 percent slopes--30 percent
 Wendane silt loam, 2 to 4 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Typic Calciaquolls, fine-silty, mesic silt loam, 0 to 2 percent slopes--3 percent
 Inclusion 2: Umlerland, 0 to 1 percent slopes--3 percent

Inclusion 3: Umlerland silty clay, 0 to 1 percent slopes--3 percent
 Inclusion 4: Playas silty clay, 0 to 1 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
 Rubylake--Landform: Lake terraces
 Kolda--Landform: Flood plains
 Wendane--Landform: Lake terraces
 Inclusion 1--Landform: Flood plains
 Inclusion 2--Landform: Lake plains
 Inclusion 3--Landform: Lake plains
 Inclusion 4--Landform: Lake plains

Major Component Description

Rubylake Series

Elevation: 5,900 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Clay loam
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Kolda Series

Elevation: 5,900 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Very poorly drained
 Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Wendane Series

Elevation: 5,900 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Somewhat poorly drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Rubylake: Alkali cordgrass, alkali sacaton, inland saltgrass
 Kolda: Cattail
 Wendane: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Inclusion 1: Alkali sacaton, bluegrass, mat muhly

Inclusion 2: Bluegrass, foxtail barley, inland saltgrass, rush, sedge
 Inclusion 3: Alkali sacaton, black greasewood, inland saltgrass
 Inclusion 4: None

Ecological Site

Rubylake: 028BY002NV
 Kolda: 028BY044NV
 Wendane: 028BY004NV
 Inclusion 1: 028BY100NV
 Inclusion 2: 028BY098NV
 Inclusion 3: 028BY020NV
 Inclusion 4: None

1681--Wendane-Logan-Umberland association

Composition

Major Components

Wendane silt loam, 0 to 2 percent slopes--40 percent
 Logan silt loam, 0 to 2 percent slopes--30 percent
 Umberland silt loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Typic Calciaquolls, fine-silty, mesic silt loam, 0 to 2 percent slopes--5 percent
 Inclusion 2: Umberland silty clay loam, 0 to 2 percent slopes--5 percent
 Inclusion 3: Aquic Natrargids, fine-silty, mixed, mesic silt loam, 0 to 2 percent slopes--3 percent
 Inclusion 4: Umberland, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
 Wendane--Landform: Lake terraces
 Logan--Landform: Flood plains
 Umberland--Landform: Lake plains
 Inclusion 1--Landform: Lake plains
 Inclusion 2--Landform: Lake plains
 Inclusion 3--Landform: Lake terraces
 Inclusion 4--Landform: Lake plains

Major Component Description

Wendane Series

Elevation: 5,900 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Somewhat poorly drained
 Dominant parent material: Alluvium derived from mixed rocks

Logan Series

Elevation: 5,900 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 100 days
 Surface layer texture: Silt loam
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Umberland Series

Elevation: 5,900 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Somewhat poorly drained
 Dominant parent material: Lacustrine sediments derived from volcanic rocks

Dominant Present Vegetation

Wendane: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Logan: Alkali sacaton, bluegrass, mat muhly
 Umberland: Alkali sacaton, black greasewood, inland saltgrass
 Inclusion 1: Alkali sacaton, bluegrass, mat muhly
 Inclusion 2: Alkali sacaton, black greasewood, inland saltgrass
 Inclusion 3: Black greasewood, inland saltgrass, rubber rabbitbrush
 Inclusion 4: Bluegrass, foxtail barley, inland saltgrass, rush, sedge

Ecological Site

Wendane: 028BY004NV
 Logan: 028BY100NV
 Umberland: 028BY020NV
 Inclusion 1: 028BY100NV
 Inclusion 2: 028BY020NV
 Inclusion 3: 028BY004NV
 Inclusion 4: 028BY098NV

1690--Krenka-Secrepass association

Composition

Major Components

Krenka loam, 4 to 15 percent slopes--50 percent
 Secrepass gravelly loam, 4 to 8 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Cumulic Endoaquolls, fine-loamy, mixed, frigid silt loam, 2 to 4 percent slopes--5 percent

Inclusion 2: Cumulic Endoaquolls, loamy-skeletal, mixed, frigid very gravelly loam, 2 to 8 percent slopes--5 percent

Inclusion 3: Cumulic Endoaquolls, fine-loamy, mixed, frigid loam, 2 to 4 percent slopes--3 percent

Inclusion 4: Typic Haploxerolls, loamy-skeletal, mixed, frigid gravelly clay loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Krenka--Landform: Fan remnants

Secrepass--Landform: Fan remnants

Inclusion 1--Landform: Flood plains

Inclusion 2--Landform: Flood plains

Inclusion 3--Landform: Flood plains

Inclusion 4--Landform: Fan remnants; geomorphic position: summit; shape of slope: concave

Major Component Description

Krenka Series

Elevation: 6,400 to 6,800 feet

Precipitation: About 16 inches

Air temperature: About 42 degrees

Frost-free season: About 85 days

Surface rock fragments: 5 percent cobbles; 20 percent gravel

Surface layer texture: Loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Secrepass Series

Elevation: 6,400 to 6,800 feet

Precipitation: About 16 inches

Air temperature: About 42 degrees

Frost-free season: About 85 days

Surface rock fragments: 5 percent cobbles; 40 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Krenka: Idaho fescue, mountain big sagebrush, mountain brome, snowberry

Secrepass: Idaho fescue, bluegrass, low sagebrush

Inclusion 1: Nevada bluegrass, alpine timothy

Inclusion 2: Bluegrass, narrowleaf cottonwood, sedge, willow

Inclusion 3: Tufted hairgrass

Inclusion 4: Bluegrass, meadow barley

Ecological Site

Krenka: 025XY004NV

Secrepass: 025XY032NV

Inclusion 1: 025XY006NV

Inclusion 2: 025XY053NV

Inclusion 3: 025XY005NV

Inclusion 4: 025XY047NV

1700--Heechee-Rubicity association

Composition

Major Components

Heechee cobbly loam, 4 to 15 percent slopes--35 percent

Rubicity gravelly sandy loam, 4 to 15 percent slopes--30 percent

Heechee extremely stony sandy loam, 4 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Krenka very stony sandy loam, 8 to 30 percent slopes--4 percent

Inclusion 2: Typic Haplaquolls, loamy-skeletal, mixed, frigid loam, 4 to 8 percent slopes--4 percent

Inclusion 3: Donna silt loam, 4 to 15 percent slopes--4 percent

Inclusion 4: Welch loam, 2 to 8 percent slopes--3 percent

Map Unit Setting

Landscape position: Fan piedmonts

Heechee--Landform: Fan remnants

Rubicity--Landform: Alluvial fans

Heechee--Landform: Fan remnants

Inclusion 1--Landform: Alluvial fans

Inclusion 2--Landform: Flood plains

Inclusion 3--Landform: Fan remnants

Inclusion 4--Landform: Flood plains

Major Component Description

Heechee Series

Elevation: 6,100 to 6,700 feet

Precipitation: About 14 inches

Air temperature: About 45 degrees

Frost-free season: About 85 days

Surface rock fragments: 5 percent cobbles; 30 percent gravel

Surface layer texture: Cobbly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Rubicity Series

Elevation: 6,100 to 6,700 feet

Precipitation: About 12 inches
 Air temperature: About 42 degrees
 Frost-free season: About 90 days
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from granitic rocks

Heechee Series

Elevation: 6,100 to 6,700 feet
 Precipitation: About 14 inches
 Air temperature: About 45 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 5 percent cobbles
 Surface layer texture: Extremely stony sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Heechee: Antelope bitterbrush
 Rubicity: Mountain big sagebrush
 Heechee: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
 Inclusion 1: Idaho fescue, mountain big sagebrush, mountain brome, snowberry
 Inclusion 2: Nevada bluegrass, Woods rose, quaking aspen, sedge
 Inclusion 3: Idaho fescue, bluebunch wheatgrass, low sagebrush
 Inclusion 4: Nevada bluegrass, alpine timothy

Ecological Site

Heechee: 025XY007NV
 Rubicity: 025XY012NV
 Heechee: 025XY007NV
 Inclusion 1: 025XY004NV
 Inclusion 2: 025XY064NV
 Inclusion 3: 025XY017NV
 Inclusion 4: 025XY006NV

1702--Heechee-McIvey-Rubicity association

Composition

Major Components

Heechee cobbly loam, 2 to 8 percent slopes--35 percent
 McIvey very cobbly loam, 2 to 8 percent slopes--30 percent
 Rubicity gravelly sandy loam, 2 to 8 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Typic Haplaquolls, coarse-loamy, mixed, frigid gravelly sandy loam, 2 to 8 percent slopes--8 percent
 Inclusion 2: Welch loam, 2 to 8 percent slopes--4 percent
 Inclusion 3: Cumulic Endoaquolls, loamy-skeletal, mixed, frigid stony loam, 2 to 8 percent slopes--2 percent
 Inclusion 4: Welch loam, 2 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Heechee--Landform: Fan remnants
 McIvey--Landform: Fan remnants
 Rubicity--Landform: Fan remnants
 Inclusion 1--Landform: Flood plains
 Inclusion 2--Landform: Flood plains
 Inclusion 3--Landform: Flood plains
 Inclusion 4--Landform: Flood plains

Major Component Description

Heechee Series

Elevation: 6,000 to 6,600 feet
 Precipitation: About 14 inches
 Air temperature: About 45 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 5 percent cobbles
 Surface layer texture: Cobbly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

McIvey Series

Elevation: 6,000 to 6,600 feet
 Precipitation: About 14 inches
 Air temperature: About 44 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Very cobbly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium and colluvium derived from mixed rocks

Rubicity Series

Elevation: 6,000 to 6,600 feet
 Precipitation: About 12 inches
 Air temperature: About 42 degrees
 Frost-free season: About 90 days
 Surface rock fragments: 30 percent gravel
 Surface layer texture: Gravelly sandy loam
 Drainage class: Well drained

Dominant parent material: Alluvium derived from granitic rocks

Dominant Present Vegetation

Heechee: Antelope bitterbrush

McIvey: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Rubicity: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Inclusion 1: Thurber needlegrass, basin big sagebrush, bluebunch wheatgrass

Inclusion 2: Basin big sagebrush, basin wildrye

Inclusion 3: Nevada bluegrass, Woods rose, quaking aspen, sedge

Inclusion 4: Tufted hairgrass

Ecological Site

Heechee: 025XY007NV

McIvey: 025XY012NV

Rubicity: 025XY012NV

Inclusion 1: 025XY014NV

Inclusion 2: 025XY003NV

Inclusion 3: 025XY064NV

Inclusion 4: 025XY005NV

1710--James Canyon-Wendane association

Composition

Major Components

James Canyon fine sandy loam, 0 to 2 percent slopes--60 percent

Wendane silt loam, 0 to 4 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: James Canyon silt loam, 0 to 2 percent slopes--5 percent

Inclusion 2: Cumulic Endoaquolls, fine-loamy over sandy or sandy-skeletal, mixed (calcareous), mesic silt loam, 0 to 2 percent slopes--5 percent

Inclusion 3: Wendane silt loam, 0 to 4 percent slopes--3 percent

Inclusion 4: James Canyon silt loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins

James Canyon--Landform: Flood plains

Wendane--Landform: Stream terraces

Inclusion 1--Landform: Stream terraces

Inclusion 2--Landform: Flood plains

Inclusion 3--Landform: Stream terraces

Inclusion 4--Landform: Flood plains

Major Component Description

James Canyon Series

Elevation: 5,600 to 6,000 feet

Precipitation: About 8 inches

Air temperature: About 47 degrees

Frost-free season: About 110 days

Surface layer texture: Fine sandy loam

Drainage class: Poorly drained

Dominant parent material: Alluvium derived from mixed rocks

Wendane Series

Elevation: 5,600 to 6,000 feet

Precipitation: About 7 inches

Air temperature: About 48 degrees

Frost-free season: About 110 days

Surface layer texture: Silt loam

Drainage class: Somewhat poorly drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

James Canyon: Alkali sacaton, bluegrass, mat muhly

Wendane: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Inclusion 1: Bluegrass, rush, sedge

Inclusion 2: Alkali sacaton, basin big sagebrush, basin wildrye, mat muhly, rubber rabbitbrush

Inclusion 3: Alkali cordgrass, alkali sacaton, inland saltgrass

Inclusion 4: Alkali sacaton, bluegrass, mat muhly

Ecological Site

James Canyon: 028BY100NV

Wendane: 028BY004NV

Inclusion 1: 028BY001NV

Inclusion 2: 028BY031NV

Inclusion 3: 028BY002NV

Inclusion 4: 028BY100NV

1711--James Canyon-Wendane-Wendane, occasionally flooded association

Composition

Major Components

James Canyon fine sandy loam, 0 to 2 percent slopes--40 percent

Wendane silt loam, 0 to 4 percent slopes--35 percent

Wendane silt loam, 0 to 2 percent slopes--15 percent

Contrasting Inclusions

- Inclusion 1: Slipback sandy loam, 0 to 2 percent slopes--5 percent
 Inclusion 2: Hulderman loam, 0 to 2 percent slopes--3 percent
 Inclusion 3: James Canyon loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins
 James Canyon--Landform: Flood plains
 Wendane--Landform: Stream terraces
 Wendane--Landform: Stream terraces
 Inclusion 1--Landform: Fan remnants
 Inclusion 2--Landform: Flood plains
 Inclusion 3--Landform: Flood plains

Major Component Description**James Canyon Series**

Elevation: 5,600 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Fine sandy loam
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks

Wendane Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Somewhat poorly drained
 Dominant parent material: Alluvium derived from mixed rocks

Wendane Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Somewhat poorly drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

James Canyon: Alkali sacaton, bluegrass, mat muhly
 Wendane: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Wendane: Alkali cordgrass, alkali sacaton, inland saltgrass

Inclusion 1: Basin wildrye, big sagebrush, black greasewood

Inclusion 2: Alkali sacaton, bluegrass, mat muhly

Inclusion 3: Alkali sacaton, basin big sagebrush, basin wildrye, mat muhly

Ecological Site

James Canyon: 028BY100NV

Wendane: 028BY004NV

Wendane: 028BY002NV

Inclusion 1: 028BY028NV

Inclusion 2: 028BY100NV

Inclusion 3: 028BY031NV

1720--Welch loam, 0 to 4 percent slopes**Composition****Major Components**

Welch loam, 0 to 4 percent slopes--85 percent

Contrasting Inclusions

Inclusion 1: Cumulic Endoaquolls, coarse-loamy, mixed, frigid sandy loam, 0 to 4 percent slopes--5 percent

Inclusion 2: Welch sandy loam, 0 to 4 percent slopes--5 percent

Inclusion 3: Cumulic Endoaquolls, sandy-skeletal, mixed, frigid sandy loam, 0 to 4 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Welch--Landform: Fan skirts
 Inclusion 1--Landform: Fan skirts
 Inclusion 2--Landform: Fan skirts
 Inclusion 3--Landform: Drainageways

Major Component Description**Welch Series**

Elevation: 5,700 to 6,400 feet
 Precipitation: About 9 inches
 Air temperature: About 44 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Loam
 Drainage class: Very poorly drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Welch: Bluegrass, rush, sedge
 Inclusion 1: Bluegrass, rush, sedge
 Inclusion 2: Alkali sacaton, bluegrass, mat muhly
 Inclusion 3: Bluegrass, rush, sedge

Ecological Site

Welch: 028BY001NV

Inclusion 1: 028BY001NV

Inclusion 2: 028BY100NV

Inclusion 3: 028BY001NV

1721--Welch-Welsum complex***Composition*****Major Components**

Welch loam, 0 to 2 percent slopes--60 percent

Welsum silt loam, 0 to 2 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Wendane silt loam, 0 to 4 percent slopes--5 percent

Inclusion 2: Wendane silt loam, 0 to 4 percent slopes--5 percent

Inclusion 3: Fluventic Endoaquolls, loamy-skeletal, mixed, frigid loam, 0 to 2 percent slopes--3 percent

Inclusion 4: Cumulic Endoaquolls, fine, montmorillonitic, mesic silt loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Welch--Landform: Fan skirts

Welsum--Landform: Fan skirts

Inclusion 1--Landform: Fan skirts

Inclusion 2--Landform: Fan skirts

Inclusion 3--Landform: Drainageways

Inclusion 4--Landform: Fan skirts; position on slope: lower

Major Component Description**Welch Series**

Elevation: 5,700 to 6,400 feet

Precipitation: About 9 inches

Air temperature: About 44 degrees

Frost-free season: About 85 days

Surface rock fragments: 5 percent gravel

Surface layer texture: Loam

Drainage class: Very poorly drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Welsum Series

Elevation: 5,700 to 6,400 feet

Precipitation: About 12 inches

Air temperature: About 43 degrees

Frost-free season: About 90 days

Surface layer texture: Silt loam

Drainage class: Very poorly drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Welch: Bluegrass, rush, sedge

Welsum: Alkali sacaton, bluegrass, mat muhly

Inclusion 1: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Inclusion 2: Alkali cordgrass, alkali sacaton, inland saltgrass

Inclusion 3: Bluegrass, rush, sedge

Inclusion 4: Alkali sacaton, bluegrass, mat muhly

Ecological Site

Welch: 028BY001NV

Welsum: 028BY100NV

Inclusion 1: 028BY004NV

Inclusion 2: 028BY002NV

Inclusion 3: 028BY001NV

Inclusion 4: 028BY100NV

1722--Welch-Slipback association***Composition*****Major Components**

Welch loam, 0 to 2 percent slopes--35 percent

Slipback sandy loam, 0 to 2 percent slopes--30 percent

Welch loam, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Wendane silt loam, 0 to 2 percent slopes--5 percent

Inclusion 2: Xerollic Natrargids, fine-loamy over sandy or sandy-skeletal, mixed, mesic loam, 0 to 2 percent slopes--5 percent

Inclusion 3: Fluventic Endoaquolls, clayey over sandy or sandy-skeletal, mixed, mesic sandy loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Fan piedmonts

Welch--Landform: Flood plains

Slipback--Landform: Fan remnants

Welch--Landform: Inset fans

Inclusion 1--Landform: Fan skirts

Inclusion 2--Landform: Fan remnants

Inclusion 3--Landform: Inset fans

Major Component Description**Welch Series**

Elevation: 5,600 to 5,700 feet

Precipitation: About 9 inches

Air temperature: About 44 degrees

Frost-free season: About 85 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Loam
 Drainage class: Moderately well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Slipback Series

Elevation: 5,600 to 5,700 feet
 Precipitation: About 8 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from granitic rocks

Welch Series

Elevation: 5,600 to 5,700 feet
 Precipitation: About 9 inches
 Air temperature: About 44 degrees
 Frost-free season: About 58 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Loam
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Welch: Alkali sacaton, basin big sagebrush, basin wildrye, mat muhly, rubber rabbitbrush
 Slipback: Basin wildrye, big sagebrush, black greasewood
 Welch: Alkali sacaton, bluegrass, mat muhly
 Inclusion 1: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Inclusion 2: Basin wildrye, big sagebrush, black greasewood
 Inclusion 3: Alkali sacaton, basin big sagebrush, basin wildrye, mat muhly, rubber rabbitbrush

Ecological Site

Welch: 028BY031NV
 Slipback: 028BY028NV
 Welch: 028BY100NV
 Inclusion 1: 028BY004NV
 Inclusion 2: 028BY028NV
 Inclusion 3: 028BY031NV

1723--Welch association

Composition

Major Components

Welch loam, 0 to 2 percent slopes--50 percent
 Welch loam, 0 to 2 percent slopes--35 percent

Contrasting Inclusions

Inclusion 1: Wendane loam, 2 to 4 percent slopes--5 percent
 Inclusion 2: James Canyon silt loam, 0 to 2 percent slopes--5 percent
 Inclusion 3: Welch loam, 0 to 2 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
 Welch--Landform: Flood plains
 Welch--Landform: Stream terraces
 Inclusion 1--Landform: Stream terraces
 Inclusion 2--Landform: Flood plains; position on slope: lower
 Inclusion 3--Landform: Drainageways

Major Component Description

Welch Series

Elevation: 6,100 to 6,400 feet
 Precipitation: About 9 inches
 Air temperature: About 44 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Loam
 Drainage class: Very poorly drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Welch Series

Elevation: 6,100 to 6,400 feet
 Precipitation: About 9 inches
 Air temperature: About 44 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Loam
 Drainage class: Very poorly drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Welch: Basin big sagebrush, basin wildrye
 Welch: Alkali sacaton, basin big sagebrush, basin wildrye, mat muhly, rubber rabbitbrush
 Inclusion 1: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Inclusion 2: Alkali sacaton, bluegrass, mat muhly
Inclusion 3: Bluegrass, rush, sedge

Ecological Site

Welch: 028BY100NV
Welch: 025XY003NV
Inclusion 1: 028BY004NV
Inclusion 2: 028BY100NV
Inclusion 3: 028BY001NV

1730--McIvey-Donna association

Composition

Major Components

McIvey very cobbly loam, 4 to 15 percent slopes--60 percent
Donna gravelly loam, 4 to 15 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Cumulic Endoaquolls, sandy-skeletal, mixed, frigid silt loam, 4 to 15 percent slopes--8 percent
Inclusion 2: Typic Argixerolls, loamy-skeletal, mixed, frigid very stony loam, 4 to 8 percent slopes--3 percent
Inclusion 3: Pachic Argixerolls, loamy-skeletal, mixed, frigid gravelly loam, 8 to 30 percent slopes--2 percent
Inclusion 4: McIvey silt loam, 15 to 50 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
McIvey--Landform: Fan remnants
Donna--Landform: Fan remnants
Inclusion 1--Landform: Flood plains
Inclusion 2--Landform: Fan remnants; position on slope: lower
Inclusion 3--Landform: Fan remnants; geomorphic position: backslope; position on slope: upper
Inclusion 4--Landform: Fan remnants; geomorphic position: backslope

Major Component Description

McIvey Series

Elevation: 5,800 to 7,000 feet
Precipitation: About 14 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface rock fragments: 20 percent gravel
Surface layer texture: Very cobbly loam
Drainage class: Well drained
Dominant parent material: Alluvium and colluvium derived from mixed rocks

Donna Series

Elevation: 5,800 to 7,000 feet
Precipitation: About 11 inches
Air temperature: About 44 degrees
Frost-free season: About 85 days
Surface rock fragments: 30 percent gravel
Surface layer texture: Gravelly loam
Drainage class: Well drained
Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

McIvey: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
Donna: Idaho fescue, bluebunch wheatgrass, low sagebrush
Inclusion 1: Nevada bluegrass, Woods rose, quaking aspen, sedge
Inclusion 2: Thurber needlegrass, basin big sagebrush, bluebunch wheatgrass
Inclusion 3: Idaho fescue, mountain big sagebrush, mountain brome, snowberry
Inclusion 4: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Ecological Site

McIvey: 025XY012NV
Donna: 025XY018NV
Inclusion 1: 025XY064NV
Inclusion 2: 025XY014NV
Inclusion 3: 025XY004NV
Inclusion 4: 025XY012NV

1731--McIvey-Chen-Donna association

Composition

Major Components

McIvey very cobbly loam, 15 to 50 percent slopes--45 percent
Chen very gravelly loam, 8 to 30 percent slopes--25 percent
Donna silt loam, 4 to 15 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Cumulic Endoaquolls, loamy-skeletal, mixed, frigid gravelly loam, 4 to 15 percent slopes--6 percent
Inclusion 2: Aridic Argixerolls, loamy-skeletal, mixed, frigid cobbly loam, 8 to 30 percent slopes--4 percent
Inclusion 3: Sumine very gravelly loam, 15 to 50 percent slopes--3 percent

Inclusion 4: Tecomar very gravelly loam, 8 to 30 percent slopes--2 percent

Map Unit Setting

Landscape position: Hills and intermontane basins
 McIvey--Landform: Hills; shape of slope: concave
 Chen--Landform: Hills; shape of slope: convex
 Donna--Landform: Fan remnants
 Inclusion 1--Landform: Drainageways
 Inclusion 2--Landform: Hills
 Inclusion 3--Landform: Hills; aspect: south
 Inclusion 4--Landform: Hills; geomorphic position: summit

Major Component Description

McIvey Series

Elevation: 5,800 to 7,400 feet
 Precipitation: About 14 inches
 Air temperature: About 44 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Very cobbly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium and colluvium derived from mixed rocks

Chen Series

Elevation: 5,800 to 7,400 feet
 Precipitation: About 12 inches
 Air temperature: About 43 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 5 percent stones and boulders; 15 percent cobbles; 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from volcanic rocks

Donna Series

Elevation: 5,800 to 7,400 feet
 Precipitation: About 11 inches
 Air temperature: About 44 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 30 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

McIvey: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Chen: Idaho fescue, bluebunch wheatgrass, low sagebrush

Donna: Thurber needlegrass, bluebunch wheatgrass, low sagebrush

Inclusion 1: Nevada bluegrass, Woods rose, quaking aspen, sedge

Inclusion 2: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Inclusion 3: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Inclusion 4: Thurber needlegrass, black sagebrush, bluebunch wheatgrass

Ecological Site

McIvey: 025XY012NV

Chen: 025XY017NV

Donna: 025XY018NV

Inclusion 1: 025XY064NV

Inclusion 2: 025XY007NV

Inclusion 3: 025XY009NV

Inclusion 4: 024XY031NV

1732--McIvey-Stampede-Heechee association

Composition

Major Components

McIvey gravelly loam, 2 to 8 percent slopes--35 percent

Stampede gravelly loam, 2 to 8 percent slopes--30 percent

Heechee cobbly loam, 4 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Heechee cobbly loam, 8 to 15 percent slopes--5 percent

Inclusion 2: McIvey cobbly loam, 15 to 30 percent slopes--5 percent

Inclusion 3: Husa loam, 0 to 2 percent slopes--4 percent

Inclusion 4: Durargidic Argixerolls, fine-loamy, mixed, frigid loam, 2 to 4 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts

McIvey--Landform: Fan remnants; geomorphic position: summit; shape of slope: convex

Stampede--Landform: Fan remnants; geomorphic position: summit; shape of slope: plane

Heechee--Landform: Fan remnants; geomorphic position: backslope; shape of slope: convex

Inclusion 1--Landform: Fan remnants; geomorphic position: summit; position on slope: upper

Inclusion 2--Landform: Fan remnants; geomorphic position: backslope; shape of slope: plane

Inclusion 3--Landform: Flood plains

Inclusion 4--Landform: Fan remnants; geomorphic position: summit; shape of slope: concave

Major Component Description

McIvey Series

Elevation: 5,700 to 6,600 feet

Precipitation: About 14 inches

Air temperature: About 44 degrees

Frost-free season: About 85 days

Surface rock fragments: 2 percent stones and boulders; 2 percent cobbles; 20 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium and colluvium derived from mixed rocks

Stampede Series

Elevation: 5,700 to 6,600 feet

Precipitation: About 12 inches

Air temperature: About 43 degrees

Frost-free season: About 85 days

Surface rock fragments: 15 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Heechee Series

Elevation: 5,700 to 6,600 feet

Precipitation: About 14 inches

Air temperature: About 45 degrees

Frost-free season: About 85 days

Surface rock fragments: 3 percent stones and boulders; 5 percent cobbles; 30 percent gravel

Surface layer texture: Cobbly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

McIvey: Mountain big sagebrush

Stampede: Thurber needlegrass, basin big sagebrush, bluebunch wheatgrass

Heechee: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Inclusion 1: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Inclusion 2: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Inclusion 3: Basin big sagebrush

Inclusion 4: Thurber needlegrass, basin big sagebrush, bluebunch wheatgrass

Ecological Site

McIvey: 025XY012NV

Stampede: 025XY014NV

Heechee: 025XY007NV

Inclusion 1: 025XY007NV

Inclusion 2: 025XY012NV

Inclusion 3: 025XY003NV

Inclusion 4: 025XY014NV

1740--Slipback-Welch association

Composition

Major Components

Slipback sandy loam, 0 to 2 percent slopes--60 percent

Welch loam, 0 to 2 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Welch loam, 0 to 2 percent slopes--8 percent

Inclusion 2: Wendane silt loam, 0 to 2 percent slopes--3 percent

Inclusion 3: Xerollic Natrargids, fine-loamy over sandy or sandy skeletal, mixed, mesic loam, 0 to 2 percent slopes--2 percent

Inclusion 4: Fluventic Endoaquolls, clayey over sandy or sandy-skeletal, mixed, mesic sandy loam, 0 to 2 percent slopes--2 percent

Map Unit Setting

Landscape position: Intermontane basins

Slipback--Landform: Fan remnants

Welch--Landform: Flood plains

Inclusion 1--Landform: Flood plains

Inclusion 2--Landform: Alluvial flats

Inclusion 3--Landform: Fan remnants

Inclusion 4--Landform: Flood plains

Major Component Description

Slipback Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 8 inches

Air temperature: About 50 degrees

Frost-free season: About 110 days

Surface layer texture: Sandy loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from granitic rocks

Welch Series

Elevation: 5,600 to 5,700 feet

Precipitation: About 9 inches
 Air temperature: About 44 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Loam
 Drainage class: Moderately well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Slipback: Basin wildrye, big sagebrush, black greasewood
 Welch: Alkali sacaton, basin big sagebrush, basin wildrye, mat muhly, rubber rabbitbrush
 Inclusion 1: Alkali sacaton, bluegrass, mat muhly
 Inclusion 2: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Inclusion 3: Alkali sacaton, basin big sagebrush, basin wildrye, mat muhly, rubber rabbitbrush
 Inclusion 4: Basin wildrye, big sagebrush, black greasewood

Ecological Site

Slipback: 028BY028NV
 Welch: 028BY031NV
 Inclusion 1: 028BY100NV
 Inclusion 2: 028BY004NV
 Inclusion 3: 028BY031NV
 Inclusion 4: 028BY028NV

1741--Slipback-Shantown-Toba association

Composition

Major Components

Slipback sandy loam, 0 to 2 percent slopes--50 percent
 Shantown gravelly loamy sand, 0 to 2 percent slopes--25 percent
 Toba loam, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Fluventic Endoaquolls, clayey over sandy or sandy-skeletal, mixed, mesic sandy loam, 0 to 2 percent slopes--2 percent
 Inclusion 2: Kunzler sandy loam, 0 to 2 percent slopes--2 percent
 Inclusion 3: Wendane loam, 0 to 2 percent slopes--1 percent

Map Unit Setting

Landscape position: Intermontane basins
 Slipback--Landform: Alluvial flats
 Shantown--Landform: Spits
 Toba--Landform: Flood plains
 Inclusion 1--Landform: Flood plains

Inclusion 2--Landform: Alluvial flats
 Inclusion 3--Landform: Alluvial flats

Major Component Description

Slipback Series

Elevation: 5,600 to 5,700 feet
 Precipitation: About 8 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface layer texture: Sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from granitic rocks

Shantown Series

Elevation: 5,600 to 5,700 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 10 percent gravel
 Surface layer texture: Gravelly loamy sand
 Drainage class: Somewhat excessively drained
 Dominant parent material: Alluvium derived from granitic rocks

Toba Series

Elevation: 5,600 to 5,700 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Loam
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

Slipback: Basin wildrye, big sagebrush, black greasewood
 Shantown: Thurber needlegrass, big sagebrush, bluebunch wheatgrass
 Toba: Alkali sacaton, basin big sagebrush, basin wildrye, mat muhly, rubber rabbitbrush
 Inclusion 1: Alkali sacaton, bluegrass, mat muhly
 Inclusion 2: Basin wildrye, big sagebrush, black greasewood
 Inclusion 3: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Ecological Site

Slipback: 028BY028NV
 Shantown: 028BY007NV
 Toba: 028BY031NV
 Inclusion 1: 028BY100NV
 Inclusion 2: 028BY028NV

Inclusion 3: 028BY004NV

1750--Heechee-Welch association

Composition

Major Components

Heechee gravelly loam, 2 to 4 percent slopes--45 percent

Welch loam, 0 to 4 percent slopes--25 percent

Welch loam, 0 to 4 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: McIvey very stony sandy loam, 2 to 8 percent slopes--5 percent

Inclusion 2: Welsum gravelly loam, 0 to 4 percent slopes--3 percent

Inclusion 3: Welch sandy loam, 0 to 4 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Heechee--Landform: Fan remnants

Welch--Landform: Fan skirts

Welch--Landform: Fan skirts

Inclusion 1--Landform: Fan remnants

Inclusion 2--Landform: Fan skirts

Inclusion 3--Landform: Fan skirts

Major Component Description

Heechee Series

Elevation: 5,700 to 6,200 feet

Precipitation: About 14 inches

Air temperature: About 45 degrees

Frost-free season: About 85 days

Surface rock fragments: 3 percent stones and boulders; 5 percent cobbles; 30 percent gravel

Surface layer texture: Gravelly loam

Drainage class: Well drained

Dominant parent material: Alluvium derived from mixed rocks

Welch Series

Elevation: 5,700 to 6,200 feet

Precipitation: About 9 inches

Air temperature: About 44 degrees

Frost-free season: About 85 days

Surface rock fragments: 5 percent gravel

Surface layer texture: Loam

Drainage class: Very poorly drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Welch Series

Elevation: 5,700 to 6,200 feet

Precipitation: About 9 inches

Air temperature: About 44 degrees

Frost-free season: About 85 days

Surface rock fragments: 5 percent gravel

Surface layer texture: Loam

Drainage class: Very poorly drained

Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Heechee: Mountain big sagebrush

Welch: Alkali sacaton, bluegrass, mat muhly

Welch: Basin big sagebrush, basin wildrye

Inclusion 1: Idaho fescue, antelope bitterbrush,

bluebunch wheatgrass, mountain big sagebrush

Inclusion 2: Alkali sacaton, bluegrass, mat muhly

Inclusion 3: Bluegrass, rush, sedge

Ecological Site

Heechee: 025XY012NV

Welch: 028BY100NV

Welch: 025XY003NV

Inclusion 1: 025XY012NV

Inclusion 2: 028BY100NV

Inclusion 3: 028BY001NV

1760--Lykal-Wendane-James Canyon association

Composition

Major Components

Lykal silt loam, 0 to 4 percent slopes--35 percent

Wendane silt loam, 0 to 2 percent slopes--30 percent

James Canyon fine sandy loam, 0 to 2 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Welch sandy loam, 0 to 2 percent slopes--5 percent

Inclusion 2: Wendane silt loam, 2 to 4 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins

Lykal--Landform: Stream terraces; position on slope: upper

Wendane--Landform: Stream terraces; position on slope: lower

James Canyon--Landform: Flood plains

Inclusion 1--Landform: Flood plains
 Inclusion 2--Landform: Stream terraces; position on slope: lower

Major Component Description

Lykal Series

Elevation: 5,800 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 50 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Somewhat poorly drained
 Dominant parent material: Alluvium derived from mixed rocks

Wendane Series

Elevation: 5,800 to 6,100 feet
 Precipitation: About 7 inches
 Air temperature: About 48 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Somewhat poorly drained
 Dominant parent material: Alluvium derived from mixed rocks

James Canyon Series

Elevation: 5,800 to 6,100 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Fine sandy loam
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Lykal: Idaho fescue, bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush
 Wendane: Alkali cordgrass, alkali sacaton, inland saltgrass
 James Canyon: Alkali sacaton, bluegrass, mat muhly
 Inclusion 1: Alkali sacaton, bluegrass, mat muhly
 Inclusion 2: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Ecological Site

Lykal: 028BY063NV
 Wendane: 028BY002NV
 James Canyon: 028BY100NV
 Inclusion 1: 028BY100NV
 Inclusion 2: 028BY004NV

1770--Donna-Mclvey-Heechee association

Composition

Major Components

Donna gravelly loam, 4 to 15 percent slopes--40 percent
 Mclvey very cobbly loam, 4 to 15 percent slopes--25 percent
 Heechee very stony loam, 4 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Abruptic Aridic Durixerolls very cobbly loam, 4 to 15 percent slopes--5 percent
 Inclusion 2: Welch loam, 2 to 8 percent slopes--3 percent
 Inclusion 3: Welch loam, 2 to 8 percent slopes--5 percent
 Inclusion 4: Cumulic Endoaquolls, loamy-skeletal, mixed, frigid loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Donna--Landform: Fan remnants
 Mclvey--Landform: Fan remnants
 Heechee--Landform: Fan remnants; position on slope: upper
 Inclusion 1--Landform: Fan remnants
 Inclusion 2--Landform: Fan remnants
 Inclusion 3--Landform: Flood plains
 Inclusion 4--Landform: Flood plains

Major Component Description

Donna Series

Elevation: 5,700 to 6,800 feet
 Precipitation: About 11 inches
 Air temperature: About 44 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 30 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Mclvey Series

Elevation: 5,700 to 6,800 feet
 Precipitation: About 14 inches
 Air temperature: About 44 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Very cobbly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium and colluvium derived from mixed rocks

Heechee Series

Elevation: 5,700 to 6,800 feet
 Precipitation: About 14 inches
 Air temperature: About 45 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 3 percent stones and boulders; 5 percent cobbles; 30 percent gravel
 Surface layer texture: Very stony loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Donna: Idaho fescue, bluebunch wheatgrass, low sagebrush
 Mclvey: Mountain big sagebrush
 Heechee: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
 Inclusion 1: Idaho fescue, bluebunch wheatgrass, low sagebrush
 Inclusion 2: Nevada bluegrass, alpine timothy
 Inclusion 3: Basin big sagebrush, basin wildrye
 Inclusion 4: Nevada bluegrass, Woods rose, quaking aspen, sedge

Ecological Site

Donna: 025XY018NV
 Mclvey: 025XY012NV
 Heechee: 025XY007NV
 Inclusion 1: 025XY017NV
 Inclusion 2: 025XY006NV
 Inclusion 3: 025XY003NV
 Inclusion 4: 025XY064NV

1780--Schoer-Welch association***Composition*****Major Components**

Schoer loam, 2 to 4 percent slopes--65 percent
 Welch loam, 0 to 2 percent slopes--25 percent

Contrasting Inclusions

Inclusion 1: Donna silt loam, 2 to 4 percent slopes--4 percent
 Inclusion 2: Mclvey stony loam, 2 to 8 percent slopes--3 percent
 Inclusion 3: Welch silt loam, 0 to 4 percent slopes--2 percent
 Inclusion 4: Stampede gravelly loam, 2 to 4 percent slopes--1 percent

Map Unit Setting

Landscape position: Fan piedmonts

Schoer--Landform: Fan remnants
 Welch--Landform: Flood plains
 Inclusion 1--Landform: Fan remnants
 Inclusion 2--Landform: Fan remnants
 Inclusion 3--Landform: Flood plains
 Inclusion 4--Landform: Fan remnants

Major Component Description**Schoer Series**

Elevation: 5,700 to 6,400 feet
 Precipitation: About 11 inches
 Air temperature: About 46 degrees
 Frost-free season: About 100 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

Welch Series

Elevation: 5,700 to 6,400 feet
 Precipitation: About 9 inches
 Air temperature: About 44 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Loam
 Drainage class: Very poorly drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Schoer: Thurber needlegrass, basin big sagebrush, bluebunch wheatgrass
 Welch: Alkali sacaton, bluegrass, mat muhly
 Inclusion 1: Thurber needlegrass, bluebunch wheatgrass, low sagebrush
 Inclusion 2: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
 Inclusion 3: Tufted hairgrass
 Inclusion 4: Thurber needlegrass, basin big sagebrush, bluebunch wheatgrass

Ecological Site

Schoer: 025XY014NV
 Welch: 028BY100NV
 Inclusion 1: 025XY018NV
 Inclusion 2: 025XY007NV
 Inclusion 3: 025XY005NV
 Inclusion 4: 025XY014NV

1790--Donna-Krenka-Mclvey association***Composition*****Major Components**

Donna gravelly loam, 4 to 15 percent slopes--40 percent

Krenka loam, 8 to 30 percent slopes--25 percent
 McIvey very cobbly loam, 4 to 15 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: McIvey cobbly loam, 4 to 15 percent slopes--6 percent
 Inclusion 2: Cumulic Endoaquolls, fine-silty, mixed, frigid gravelly sandy loam, 0 to 2 percent slopes--4 percent
 Inclusion 3: Aridic Argixerolls, loamy-skeletal, mixed, frigid very gravelly loam, 15 to 50 percent slopes--3 percent
 Inclusion 4: Welch loam, 2 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts

Donna--Landform: Fan remnants; position on slope: upper

Krenka--Landform: Fan remnants; position on slope: upper

McIvey--Landform: Fan remnants; geomorphic position: summit; shape of slope: concave

Inclusion 1--Landform: Fan remnants; position on slope: lower

Inclusion 2--Landform: Flood plains

Inclusion 3--Landform: Fan remnants; geomorphic position: backslope; shape of slope: plane; aspect: south

Inclusion 4--Landform: Flood plains

Major Component Description

Donna Series

Elevation: 6,200 to 6,800 feet
 Precipitation: About 11 inches
 Air temperature: About 44 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 30 percent gravel
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Krenka Series

Elevation: 6,200 to 6,800 feet
 Precipitation: About 16 inches
 Air temperature: About 42 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 5 percent cobbles; 20 percent gravel
 Surface layer texture: Loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks

McIvey Series

Elevation: 6,200 to 6,800 feet
 Precipitation: About 14 inches
 Air temperature: About 44 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 20 percent gravel
 Surface layer texture: Very cobbly loam
 Drainage class: Well drained
 Dominant parent material: Alluvium and colluvium derived from mixed rocks

Dominant Present Vegetation

Donna: Antelope bitterbrush, bluebunch wheatgrass, bluegrass, low sagebrush

Krenka: Mountain big sagebrush, snowberry

McIvey: Idaho fescue, Utah serviceberry, bluebunch wheatgrass

Inclusion 1: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Inclusion 2: Nevada bluegrass, Woods rose, quaking aspen, sedge

Inclusion 3: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Inclusion 4: Nevada bluegrass, alpine timothy

Ecological Site

Donna: 025XY018NV

Krenka: 025XY004NV

McIvey: 025XY046NV

Inclusion 1: 025XY012NV

Inclusion 2: 025XY064NV

Inclusion 3: 025XY009NV

Inclusion 4: 025XY006NV

1800--Chen-Graley-Rock outcrop association

Composition

Major Components

Chen very gravelly loam, 15 to 50 percent slopes--50 percent

Graley stony loam, 15 to 50 percent slopes--20 percent

Rock outcrop--15 percent

Contrasting Inclusions

Inclusion 1: Lithic Xerollic Haplargids, loamy-skeletal, mixed, mesic, 8 to 30 percent slopes--6 percent

Inclusion 2: Cleavage extremely gravelly loam, 8 to 30 percent slopes--3 percent

Inclusion 3: Sumine very gravelly loam, 15 to 50 percent slopes--3 percent

Inclusion 4: Welch loam, 2 to 8 percent slopes--3 percent

Map Unit Setting

Landscape position: Mountains

Chen--Landform: Mountains; geomorphic position: summit

Graley--Landform: Mountains; geomorphic position: summit

Rock outcrop--Landform: Mountains

Inclusion 1--Landform: Mountains; geomorphic position: backslope; position on slope: lower

Inclusion 2--Landform: Mountains; geomorphic position: summit

Inclusion 3--Landform: Mountains; geomorphic position: backslope; aspect: south

Inclusion 4--Landform: Drainageways

Major Component Description**Chen Series**

Elevation: 5,900 to 8,200 feet

Precipitation: About 12 inches

Air temperature: About 43 degrees

Frost-free season: About 85 days

Surface rock fragments: 5 percent stones and boulders; 15 percent cobbles; 40 percent gravel

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks

Graley Series

Elevation: 5,900 to 8,200 feet

Precipitation: About 12 inches

Air temperature: About 42 degrees

Frost-free season: About 85 days

Surface rock fragments: 40 percent cobbles; 15 percent gravel

Surface layer texture: Stony loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from volcanic rocks

Rock outcrop Miscellaneous Area

Elevation: 5,900 to 8,200 feet

Dominant Present Vegetation

Chen: Idaho fescue, bluebunch wheatgrass, low sagebrush

Graley: Idaho fescue, antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Rock outcrop: None

Inclusion 1: Indian ricegrass, Thurber needlegrass, black sagebrush

Inclusion 2: Idaho fescue, black sagebrush, low sagebrush

Inclusion 3: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Inclusion 4: Basin big sagebrush, basin wildrye, creeping wildrye, willow

Ecological Site

Chen: 025XY017NV

Graley: 025XY012NV

Rock outcrop: None

Inclusion 1: 024XY030NV

Inclusion 2: 025XY024NV

Inclusion 3: 025XY009NV

Inclusion 4: 025XY001NV

1810--Sumine-Tusel-Hapgood association**Composition****Major Components**

Sumine very gravelly loam, 50 to 75 percent slopes--45 percent

Tusel gravelly loam, 50 to 75 percent slopes--25 percent

Hapgood very gravelly loam, 50 to 75 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Cleavage extremely gravelly loam, 15 to 50 percent slopes--10 percent

Inclusion 2: Chen very gravelly loam, 15 to 30 percent slopes--3 percent

Inclusion 3: Welch silt loam, 2 to 8 percent slopes--1 percent

Inclusion 4: Bullump very gravelly loam, 30 to 50 percent slopes--1 percent

Map Unit Setting

Landscape position: Mountains

Sumine--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: south

Tusel--Landform: Mountains; geomorphic position: backslope; shape of slope: convex; aspect: north

Hapgood--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north

Inclusion 1--Landform: Mountains; geomorphic position: summit; position on slope: upper; shape of slope: convex

Inclusion 2--Landform: Mountains; geomorphic position: summit; position on slope: upper; shape of slope: convex

Inclusion 3--Landform: Drainageways

Inclusion 4--Landform: Mountains; geomorphic position: backslope; shape of slope: concave

Major Component Description

Sumine Series

Elevation: 6,200 to 7,000 feet
 Precipitation: About 12 inches
 Air temperature: About 42 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 10 percent cobbles; 50 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Tusel Series

Elevation: 6,200 to 7,000 feet
 Precipitation: About 16 inches
 Air temperature: About 42 degrees
 Frost-free season: About 70 days
 Surface layer texture: Gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from quartzite

Hapgood Series

Elevation: 6,200 to 7,000 feet
 Precipitation: About 16 inches
 Air temperature: About 42 degrees
 Frost-free season: About 70 days
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from limestone and dolomite

Dominant Present Vegetation

Sumine: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush
 Tusel: Idaho fescue
 Hapgood: Idaho fescue, mountain big sagebrush, mountain brome, snowberry
 Inclusion 1: Idaho fescue, black sagebrush, low sagebrush
 Inclusion 2: Idaho fescue, bluebunch wheatgrass, low sagebrush
 Inclusion 3: Tufted hairgrass
 Inclusion 4: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush, mountain brome

Ecological Site

Sumine: 025XY009NV
 Tusel: 025XY010NV
 Hapgood: 025XY004NV
 Inclusion 1: 025XY024NV
 Inclusion 2: 025XY017NV
 Inclusion 3: 025XY005NV

Inclusion 4: 025XY016NV

1820--Hussa-Halleck-Welsum association

Composition

Major Components

Hussa silt loam, 0 to 2 percent slopes--35 percent
 Halleck silt loam, 0 to 2 percent slopes--30 percent
 Welsum silt loam, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Fluvaquent Haploxerolls, sandy-skeletal, mixed, frigid sandy loam, 0 to 2 percent slopes--6 percent
 Inclusion 2: Sonoma silt loam, 0 to 2 percent slopes--5 percent
 Inclusion 3: Typic Haplaquolls, sandy-skeletal, mixed, frigid loam, 0 to 2 percent slopes--4 percent

Map Unit Setting

Landscape position: Intermontane basins
 Husa--Landform: Flood plains; position on slope: upper
 Halleck--Landform: Flood plains; position on slope: lower
 Welsum--Landform: Flood plains
 Inclusion 1--Landform: Stream terraces
 Inclusion 2--Landform: Alluvial flats
 Inclusion 3--Landform: Natural levees

Major Component Description

Hussa Series

Elevation: 5,600 to 6,500 feet
 Precipitation: About 12 inches
 Air temperature: About 44 degrees
 Frost-free season: About 90 days
 Surface layer texture: Silt loam
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Halleck Series

Elevation: 5,600 to 6,500 feet
 Precipitation: About 11 inches
 Air temperature: About 44 degrees
 Frost-free season: About 85 days
 Surface layer texture: Silt loam
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Welsum Series

Elevation: 5,600 to 6,500 feet
 Precipitation: About 12 inches

Air temperature: About 43 degrees
 Frost-free season: About 90 days
 Surface layer texture: Silt loam
 Drainage class: Very poorly drained
 Dominant parent material: Alluvium derived from mixed rocks

Dominant Present Vegetation

Hussa: Tufted hairgrass
 Halleck: Tufted hairgrass
 Welsum: Tufted hairgrass
 Inclusion 1: Basin big sagebrush
 Inclusion 2: Alkali sacaton, basin wildrye, black greasewood, inland saltgrass
 Inclusion 3: Bluegrass, narrowleaf cottonwood, sedge, willow

Ecological Site

Hussa: 025XY005NV
 Halleck: 025XY005NV
 Welsum: 025XY005NV
 Inclusion 1: 025XY014NV
 Inclusion 2: 024XY007NV
 Inclusion 3: 025XY053NV

1831--Enko-Kelk association

Composition

Major Components

Enko fine sandy loam, 2 to 8 percent slopes--35 percent
 Kelk silt loam, 0 to 2 percent slopes--35 percent
 Enko silt loam, nearly level, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Xeric Torriorthents fine sandy loam, 15 to 30 percent slopes--5 percent
 Inclusion 2: Chiara silt loam, 0 to 2 percent slopes--3 percent
 Inclusion 3: Nevador gravelly loam, 4 to 8 percent slopes--2 percent

Map Unit Setting

Landscape position: Fan piedmonts
 Enko--Landform: Fan skirts
 Kelk--Landform: Inset fans
 Enko--Landform: Inset fans
 Inclusion 1--Landform: Pediments; geomorphic position: backslope
 Inclusion 2--Landform: Partial ballenas; geomorphic position: summit
 Inclusion 3--Landform: Fan remnants; geomorphic

position: summit

Major Component Description

Enko Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 15 percent gravel
 Surface layer texture: Fine sandy loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Kelk Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface rock fragments: 5 percent gravel
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Enko Series

Elevation: 5,600 to 6,000 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Well drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Enko: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Kelk: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Enko: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Inclusion 1: Indian ricegrass, Wyoming big sagebrush, black sagebrush
 Inclusion 2: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass
 Inclusion 3: Thurber needlegrass, Wyoming big sagebrush, bluebunch wheatgrass

Ecological Site

Enko: 025XY019NV

Kelk: 025XY019NV
 Enko: 025XY019NV
 Inclusion 1: 025XY025NV
 Inclusion 2: 025XY019NV
 Inclusion 3: 025XY019NV

1840--Amene-Belsac-Chen association

Composition

Major Components

Amene very gravelly silt loam, 15 to 30 percent slopes--45 percent
 Belsac very gravelly loam, 15 to 30 percent slopes--25 percent
 Chen very gravelly loam, 8 to 30 percent slopes--15 percent

Contrasting Inclusions

Inclusion 1: Haunchee very cobbly loam, 8 to 30 percent slopes--6 percent
 Inclusion 2: Adobe very gravelly silt loam, 2 to 8 percent slopes--5 percent
 Inclusion 3: Halleck silt loam, 2 to 4 percent slopes--3 percent
 Inclusion 4: Typic Haplaquolls, loamy-skeletal, mixed, frigid very gravelly loam, 4 to 8 percent slopes--1 percent

Map Unit Setting

Landscape position: Mountains

Amene--Landform: Mountains; geomorphic position: backslope; shape of slope: convex

Belsac--Landform: Mountains; geomorphic position: backslope; shape of slope: concave

Chen--Landform: Mountains; geomorphic position: summit

Inclusion 1--Landform: Mountains; geomorphic position: summit

Inclusion 2--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Inclusion 3--Landform: Drainageways

Inclusion 4--Landform: Drainageways

Major Component Description

Amene Series

Elevation: 6,500 to 7,000 feet
 Precipitation: About 14 inches
 Air temperature: About 44 degrees
 Frost-free season: About 80 days
 Surface rock fragments: 1 percent stones and boulders; 2 percent cobbles; 30 percent gravel
 Surface layer texture: Very gravelly silt loam

Drainage class: Well drained
 Dominant parent material: Residuum derived from limestone and dolomite

Belsac Series

Elevation: 6,500 to 7,000 feet
 Precipitation: About 16 inches
 Air temperature: About 42 degrees
 Frost-free season: About 65 days
 Surface rock fragments: 5 percent cobbles; 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Chen Series

Elevation: 6,500 to 7,000 feet
 Precipitation: About 12 inches
 Air temperature: About 43 degrees
 Frost-free season: About 85 days
 Surface rock fragments: 5 percent stones and boulders; 15 percent cobbles; 40 percent gravel
 Surface layer texture: Very gravelly loam
 Drainage class: Well drained
 Dominant parent material: Residuum and colluvium derived from volcanic rocks

Dominant Present Vegetation

Amene: Idaho fescue, Utah serviceberry, bluebunch wheatgrass

Belsac: Idaho fescue, mountain big sagebrush, mountain brome, snowberry

Chen: Idaho fescue, bluebunch wheatgrass, low sagebrush

Inclusion 1: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush

Inclusion 2: Idaho fescue, black sagebrush, low sagebrush

Inclusion 3: Tufted hairgrass

Inclusion 4: Nevada bluegrass, Woods rose, quaking aspen, sedge

Ecological Site

Amene: 025XY046NV

Belsac: 025XY004NV

Chen: 025XY017NV

Inclusion 1: 028BY043NV

Inclusion 2: 025XY024NV

Inclusion 3: 025XY005NV

Inclusion 4: 025XY064NV

1850--Bullump-Cleavage-Rock outcrop association

Composition

Major Components

Bullump very gravelly loam, 30 to 75 percent slopes--45 percent
 Cleavage extremely gravelly loam, 15 to 50 percent slopes--25 percent
 Rock outcrop--15 percent

Contrasting Inclusions

Inclusion 1: Pachic Cryoborolls, fine-loamy, mixed gravelly silt loam, 15 to 50 percent slopes--5 percent
 Inclusion 2: Hapgood very gravelly loam, 15 to 50 percent slopes--5 percent
 Inclusion 3: Sumine very gravelly loam, 30 to 50 percent slopes--4 percent
 Inclusion 4: Rozara very gravelly loamy coarse sand, 30 to 75 percent slopes--1 percent

Map Unit Setting

Landscape position: Mountains

Bullump--Landform: Mountains; geomorphic position: backslope

Cleavage--Landform: Mountains; geomorphic position: summit; shape of slope: convex

Rock outcrop--Landform: Mountains

Inclusion 1--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north

Inclusion 2--Landform: Mountains; geomorphic position: backslope; shape of slope: concave; aspect: north

Inclusion 3--Landform: Mountains; geomorphic position: backslope; position on slope: lower

Inclusion 4--Landform: Mountains; geomorphic position: summit

Major Component Description

Bullump Series

Elevation: 6,500 to 8,800 feet

Precipitation: About 16 inches

Air temperature: About 42 degrees

Frost-free season: About 80 days

Surface rock fragments: 20 percent cobbles

Surface layer texture: Very gravelly loam

Drainage class: Well drained

Dominant parent material: Colluvium derived from pyroclastic and extrusive volcanic rocks

Cleavage Series

Elevation: 6,500 to 8,800 feet

Precipitation: About 14 inches

Air temperature: About 44 degrees

Frost-free season: About 80 days

Surface rock fragments: 5 percent cobbles; 70 percent gravel

Surface layer texture: Extremely gravelly loam

Drainage class: Well drained

Dominant parent material: Residuum and colluvium derived from sedimentary rocks

Rock outcrop Miscellaneous Area

Elevation: 6,500 to 8,800 feet

Dominant Present Vegetation

Bullump: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush, mountain brome

Cleavage: Idaho fescue, black sagebrush, low sagebrush

Rock outcrop: None

Inclusion 1: Mountain brome

Inclusion 2: Idaho fescue, mountain big sagebrush, mountain brome, snowberry

Inclusion 3: Antelope bitterbrush, bluebunch wheatgrass, mountain big sagebrush

Inclusion 4: Bluebunch wheatgrass, curlleaf mountainmahogany, mountain big sagebrush

Ecological Site

Bullump: 025XY016NV

Cleavage: 025XY024NV

Rock outcrop: None

Inclusion 1: 025XY065NV

Inclusion 2: 025XY004NV

Inclusion 3: 025XY009NV

Inclusion 4: 025XY071NV

1861--Equis-Devilsgait association

Composition

Major Components

Equis silty clay, 0 to 2 percent slopes--50 percent

Devilsgait silt loam, 0 to 2 percent slopes--40 percent

Contrasting Inclusions

Inclusion 1: Kolda silt loam, 0 to 2 percent slopes--5 percent

Inclusion 2: Equis silty clay, 0 to 2 percent slopes--3 percent

Inclusion 3: Water--2 percent

Map Unit Setting

Landscape position: Intermontane basins

Equis--Landform: Stream terraces

Devilsgait--Landform: Lake plains

Inclusion 1--Landform: Stream terraces

Inclusion 2--Landform: Alluvial flats

Inclusion 3--Landform: Depressions

Major Component Description

Equis Series

Elevation: 5,900 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Devilsgait Series

Elevation: 5,900 to 6,000 feet
 Precipitation: About 9 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Very poorly drained
 Dominant parent material: Alluvium derived from mixed rocks, loess and volcanic ash

Dominant Present Vegetation

Equis: Inland saltgrass, sedge, western wheatgrass
 Devilsgait: Cattail
 Inclusion 1: Bluegrass, rush, sedge
 Inclusion 2: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush
 Inclusion 3: None

Ecological Site

Equis: 028BY012NV
 Devilsgait: 028BY044NV
 Inclusion 1: 028BY001NV
 Inclusion 2: 028BY004NV
 Inclusion 3: None

1862--Equis-Kolda association

Composition

Major Components

Equis silty clay, 0 to 2 percent slopes--40 percent
 Equis silty clay, 0 to 2 percent slopes--25 percent
 Kolda silt loam, 0 to 2 percent slopes--20 percent

Contrasting Inclusions

Inclusion 1: Equis silty clay, 0 to 2 percent slopes--5 percent
 Inclusion 2: Typic Halaquepts, fine, montmorillonitic

(calcareous), mesic silty clay loam, 0 to 2 percent slopes--5 percent

Inclusion 3: Kolda silt loam, 0 to 1 percent slopes--5 percent

Map Unit Setting

Landscape position: Intermontane basins
 Equis--Landform: Stream terraces
 Equis--Landform: Stream terraces
 Kolda--Landform: Lake plains
 Inclusion 1--Landform: Lake terraces
 Inclusion 2--Landform: Stream terraces
 Inclusion 3--Landform: Lake plains

Major Component Description

Equis Series

Elevation: 5,900 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Equis Series

Elevation: 5,900 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silty clay
 Drainage class: Poorly drained
 Dominant parent material: Alluvium derived from mixed rocks and lacustrine sediments

Kolda Series

Elevation: 5,900 to 6,000 feet
 Precipitation: About 8 inches
 Air temperature: About 47 degrees
 Frost-free season: About 110 days
 Surface layer texture: Silt loam
 Drainage class: Very poorly drained
 Dominant parent material: Alluvium derived from mixed rocks over lacustrine sediments

Dominant Present Vegetation

Equis: Alkali cordgrass, alkali sacaton, inland saltgrass
 Equis: Inland saltgrass, sedge, western wheatgrass
 Kolda: Bluegrass, rush, sedge
 Inclusion 1: Basin wildrye, black greasewood, inland saltgrass, rubber rabbitbrush

Inclusion 2: Alkali sacaton, bluegrass, mat muhly
Inclusion 3: Cattail

Ecological Site

Equis: 028BY002NV
Equis: 028BY012NV
Kolda: 028BY001NV
Inclusion 1: 028BY004NV
Inclusion 2: 028BY100NV
Inclusion 3: 028BY044NV

1870--Denied Access

Composition

Major Components
Denied Access--100 percent

1880--Water

Composition

Major Components
Water--100 percent

Map Unit Setting

Landscape position: Mountains and intermontane basins
Water--Landform: Depressions

Major Component Description

Water Miscellaneous Area
Elevation: 4,400 to 9,300 feet

Prime Farmland

Prime Farmland and Other Important Farmland

In this section, *prime farmland* and other important farmland are defined. The map units in the survey area that are considered prime farmland are listed under "Prime Farmland Map Units" at the end of this section.

Prime Farmland

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. The acreage of high-quality farmland is limited, and the U.S. Department of Agriculture recognizes that government at local, State, and Federal levels, as well as individuals, must encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland soils, as defined by the U.S. Department of Agriculture, are soils that are best suited to food, seed, forage, fiber, and oilseed crops. Such soils have properties that favor the economic production of sustained high yields of crops. The soils need only to be treated and managed by acceptable farming methods. An adequate moisture supply and a sufficiently long growing season are required. Prime farmland soils produce the highest yields with minimal expenditure of energy and economic resources, and farming these soils result in the least damage to the environment.

Prime farmland soils may presently be used as cropland, pasture, and woodland or for other purposes. They are used for food and fiber or are available for these uses. Urban or built-up land and water areas cannot be considered prime farmland. Urban or built-up land is any contiguous unit of 10 acres or more in size that is used for such purposes as housing, industrial, and commercial sites, sites for institutions or public buildings, small parks, golf courses, cemeteries, railroad yards, airports, sanitary landfills, sewage treatment plants, and water-control structures.

Prime farmland soils commonly receive an adequate and dependable supply of moisture from precipitation or irrigation. The temperature and growing season are

favorable, and the level of acidity or alkalinity and the content of salts and sodium are acceptable. The soils have few, if any rocks and are permeable to water and air. They are not excessively erodible or saturated with water for long periods, and they are not frequently flooded during the growing season or are protected from flooding. Slopes range mainly from 0 to 6 percent.

Soils that have a high water table, are subject to flooding, or are droughty may qualify as prime farmland where these limitations are overcome by drainage measures, flood control, or irrigation. Onsite evaluation is necessary to determine the effectiveness of corrective measures. More information about the criteria for prime farmland can be obtained at the local office of the Natural Resources Conservation Service.

A recent trend in land use has been the conversion of prime farmland to urban and industrial uses. The loss of prime farmland to other uses puts pressure on lands that are less productive than prime farmland.

About 6,343 acres, or nearly 0.2 percent of the survey area, would meet the requirements for prime farmland if an adequate and dependable supply of irrigation water were available.

The map unit in the survey area that meets the requirement for prime farmland are listed under "Prime Farmland Map Units." On some soils included in the list, measures that overcome limitations are needed. The location of each map unit is shown on the detailed soil maps at the back of this publication. This list does not constitute a recommendation for a particular land use.

Unique Farmland

Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops. It has the special combination of soil qualities, location, growing season, and moisture supply needed for the economic production of sustained high yields of a specific high-quality crop when treated and managed by acceptable farming methods. Examples of such crops are citrus, tree nuts, olives, cranberries, and vegetables.

Unique farmland is used for a specific high-value food or fiber crop; has an adequate supply of available moisture for the specific crop because of stored moisture, precipitation, or irrigation; and has a combination of soil qualities, growing season, temperature, humidity, air drainage, elevation, aspect, and other factors, such as nearness to markets, that favor the production of a specific food or fiber crop.

Lists of unique farmland are developed as needed in cooperation with conservation districts and other entities. There are presently no soils recognized as unique farmland in Nevada.

Additional Farmland of Statewide Importance

Some areas other than areas of prime and unique farmland are of statewide importance in the production of food, feed, fiber, forage, and oilseed crops. The criteria used in defining and delineating these areas are

determined by the appropriate State agency or agencies. Generally, additional farmland of statewide importance includes areas that nearly meet the criteria for prime farmland and that economically produce high yields of crops when treated and managed by acceptable farming methods. Some areas can produce as high a yield as areas of prime farmland if conditions are favorable. In some states additional farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

Nevada has designated any farmland that is irrigated to be of statewide importance.

Prime Farmland Map Unit

The following map unit is prime farmland where irrigated with an adequate and dependable water supply:

1480--Tulase-Linoyer association

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories. Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 15, "Classification of the Soils," in Part II of this Publication shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Eleven soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Mollisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Xeroll (*Xer*, meaning *xeric*, plus *oll*, from *Mollisol*).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Argixeroll. (*Argi*, meaning *presence of argillic horizon*, plus *xeroll*, the suborder of the *Mollisols* that have a *xeric* moisture regime).

SUBGROUP. Each great group has a typical subgroup. Other subgroups are intergrades or extragrades. The typical is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other known kind of soil. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Argixerolls.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the

properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineral content, temperature regime, thickness of the root zone, consistence, moisture equivalent, slope, and permanent cracks. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is loamy-skeletal, mixed, frigid, Typic Argixerolls.

SERIES. The series consists of soils that have similar horizons in their profile. The horizons are similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. The texture of the surface layer or of the substratum can differ within a series.

Taxonomic Units and Their Morphology

In this section, each taxonomic unit recognized in the survey area is described. The descriptions are arranged in alphabetic order.

Characteristics of the soil and the material in which it formed are identified for each unit. A pedon, a small three-dimensional area of soil, that is typical of the unit in the survey area is described. The detailed description of each soil horizon follow standards in the "Soil Survey Manual"(28). Many of the technical terms used in the descriptions are defined in "Soil Taxonomy"(29). Unless otherwise stated, colors in the descriptions are for dry soil. Following the pedon description is the range of important characteristics of the soils in the unit.

The map units of each taxonomic unit are described in the section "Detailed Soil Map Units".

Adobe Series

The Adobe series consists of shallow, well drained soils that formed in residuum and colluvium from limestone and dolomite. Adobe soils are on mountains. Slopes are 8 to 75 percent. The mean annual precipitation is about 18 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic Lithic Cryoborolls

Typical pedon: Adobe very gravelly silt loam located in an area of map unit 530. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with approximately 60 percent pebbles, 5 percent cobbles.

A--0 to 2 inches; dark grayish brown (10YR 4/2) very gravelly silt loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and few fine roots; common very fine interstitial pores; few thin lime pendants and coating on undersides of rock fragments; 55 percent pebbles; slightly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

Bk1--2 to 7 inches; brown (10YR 4/3) very gravelly silt loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and few fine roots; common very fine interstitial pores; many thin lime coating on undersides of rock fragments; 45 percent pebbles; strongly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

Bk2--7 to 11 inches; brown (10YR 5/3) very gravelly loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and few fine roots; common interstitial pores; many thin lime coating and pendants on undersides of rock fragments; 40 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary.

R--11 inches; hard, fractured, limestone.

Type location: Elko County, Nevada; approximately 13 miles southwest of Currie in the Cherry Creek mountains at about 1,600 feet north and 2,200 feet east of the southwest corner of section 8, T.26 N., R.63 E.; (40 degrees, 08 minutes, 26 seconds north latitude and 114 degrees, 53 minutes, 37 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually moist, moist in winter through mid spring dry late spring through fall. Aridic Xeric moisture regime.

Soil temperature: 38 to 45 degrees F.

Summer soil temperature: 54 to 59 degrees F.

Mollic epipedon thickness: 10 to 20 inches.

Chroma: Darker than 5.5 dry and 3.5 moist when the surface 7 inches is mixed.

Depth to bedrock: 14 to 20 inches.

Control section:

Clay content--18 to 27 percent.

Rock fragments--35 to 60 percent pebbles.

Calcium carbonate equivalent--40 to 60 percent by weight of the 20 millimeter soil fraction.

A horizon:

Value--4 through 6 dry, 3 or 4 moist, surface may have value of 6 dry but when mixed is greater than 5.5.

Chroma--2 or 3.

Bk horizons:

Value--4 or 5 dry.

Texture--Very gravelly silt loam or very gravelly loam.

Secondary lime accumulation--Common to many thin to moderately thick soft lime coating on undersides of pebbles and common to many thin to moderately thick lime pendants on the undersides of pebbles in the lower part of the horizon.

Amene Series

The Amene series consists of shallow, well drained soils that formed in residuum from limestone and dolomite.

Amene soils are on mountains. Slopes are 30 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, frigid Lithic Calcixerolls

Typical pedon: Amene very gravelly silt loam 30 to 50 percent slopes, is located in an area of map unit 151. (Colors are for dry soils unless otherwise noted.) The soil surface is partially covered with approximately 30 percent pebbles, 2 percent cobbles, and less than 1 percent stones.

A1--0 to 6 inches; grayish brown (10YR 5/2) very gravelly silt loam, very dark grayish brown (10YR 3/2) moist; weak medium platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine interstitial pores; 30 percent pebbles and 5 percent cobbles; strongly effervescent (10 percent calcium carbonate equivalent); moderately alkaline (pH 8.4); clear smooth boundary.

A2--6 to 12 inches; brown (10YR 5/3) very gravelly silt loam, very dark grayish brown (10YR 3/2) moist; massive; soft, very friable, slightly sticky and slightly

plastic; many very fine and fine roots; many very fine and fine interstitial pores; 5 percent fine slightly hard lime masses; few thin lime pendants on the undersides of coarse fragments; 45 percent pebbles and 5 percent cobbles; violently effervescent (20 percent calcium carbonate equivalent); moderately alkaline (pH 8.4); clear smooth boundary.

Bk--12 to 18 inches; white (10YR 8/2) very gravelly silt loam, very pale brown (10YR 7/3) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; few very fine interstitial pores; 10 percent weak lime cementation; 10 percent discontinuous fine lime in seams and soft masses; many thin lime pendants on the undersides of coarse fragments; 45 percent pebbles and 10 percent cobbles; violently effervescent (50 percent calcium carbonate equivalent); strongly alkaline (pH 8.6); abrupt smooth boundary.

R--18 inches; limestone.

Type location: Elko County, Nevada; approximately 7 miles west of Oasis; about 2,200 feet east and 100 feet south of the northwest corner of section 27, T.37 N., R.65 E.; (41 degrees, 04 minutes, 03 seconds north latitude and 114 degrees, 36 minutes, 47 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in the winter through early summer, dry late July through October for 80 to 100 consecutive days.

Soil temperature: 44 to 47 degrees F.

Depth to bedrock: 14 to 20 inches.

Mollic epipedon thickness: 7 to 13 inches.

Reaction: Mildly alkaline to strongly alkaline.

Depth to calcic horizon: 7 to 13 inches.

Control section:

Clay content--18 to 27 percent.

A horizons:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--2 or 3.

Bk horizon:

Value--5 through 8 dry, 3 through 7 moist.

Consistence--Slightly hard to hard dry, slightly sticky to sticky and slightly plastic to plastic wet.

Chroma--2 through 4 dry and moist.

Texture--Silt loam or loam.

Rock fragments--40 to 60 percent, mainly pebbles with up to 15 percent cobbles.

Calcium carbonate equivalent--40 to 60 percent (less than 20 millimeter fraction).

Other features--Thin to thick lime coating and pendants are common on underside of rock fragments or coating all surfaces of rock fragments. Some pedons have 5 to 10 percent lime masses and filaments of lime.

Amtoft Series

The Amtoft series consists of shallow, well drained and somewhat excessively drained, moderately rapid permeable soils that formed in residuum and colluvium from limestone and dolomite. Amtoft soils are on mountains. Slopes range from 8 to 75 percent. The average annual precipitation is about 10 inches and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, mesic Lithic Xerollic Calciorthids

Typical pedon: Amtoft very gravelly loam located in an area of map unit 1540. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 60 percent pebbles and 5 percent cobbles.

A--0 to 4 inches; light brownish gray (10YR 6/2) very gravelly loam, brown (10YR 5/3) moist; strong fine granular structure; soft, very friable, sticky and slightly plastic; many very fine, fine and few medium roots; many very fine interstitial pores; 35 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

Bk1--4 to 10 inches; pale brown (10YR 6/3) very gravelly loam, brown (10YR 5/3) moist; moderate medium subangular blocky structure; soft, very friable, sticky and slightly plastic; many very fine, fine, few medium and coarse roots; many fine tubular pores; rock fragments are continuously lime coated with 4 millimeter thick pendants on undersides; 40 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.

Bk2--10 to 15 inches; brown (10YR 5/3) extremely gravelly loam, dark brown (10YR 4/3) moist; slightly hard, friable, sticky and slightly plastic; common very fine roots; many very fine and common fine tubular pores; rock fragments are continuous lime coated with 4 millimeter thick pendants on undersides; 65 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); abrupt irregular boundary.

R--15 inches; limestone.

Type location: Elko County, Nevada; approximately 1 1/2 miles north of Ferber Reservoir number 1; 700 feet

south and 1,400 feet west of the northeast corner of section 30, T.28 N., R.70 E.; (40 degrees, 16 minutes, 27 seconds north latitude and 114 degrees, 06 minutes, 40 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry between a depth of 8 inches and bedrock. In 7 out of 10 years they are dry in all parts of the moisture control section 70 to 85 days during the summer and are continually moist 60 to 75 days during the winter and early spring.

Soil temperature: 47 to 59 degrees F.

Depth to bedrock: 10 to 20 inches.

Calcic horizon: 6 to 11 inches thick.

Control section:

Clay content--12 to 27 percent.

Rock fragments--35 to 80 percent.

Calcium carbonate equivalent--More than 40 percent, including the lime in the rock fragments of less than 20 millimeter size, between a depth of 10 inches and bedrock.

A horizon:

Hue--2.5Y, 10YR, or 7.5YR.

Value--5 through 7 dry, 3 through 5 moist, dry value of 5 and moist values of 3 occur within 4 inches of the surface in some pedons.

Chroma--2 or 3.

Reaction--Mildly alkaline to strongly alkaline.

Calcium carbonate equivalent--20 to 40 percent.

Bk horizon:

Hue--2.5Y, 10YR, or 7.5YR.

Value--5 through 8 dry, 4 through 7 moist.

Chroma--2 through 4.

Reaction--Moderately alkaline or strongly alkaline.

Textures--Very flaggy loam, extremely flaggy loam, extremely flaggy fine sandy loam, very cobbly loam, extremely cobbly loam, very gravelly loam, extremely gravelly loam and very gravelly fine sandy loam.

Rock fragments--35 to 80 percent, mainly limestone flagstones, cobbles, and pebbles.

Calcium carbonate equivalent--40 to 80 percent.

Consistence--Soft to slightly hard, very friable or friable, sticky to slightly sticky and slightly plastic or plastic.

Appian Series

The Appian series consists of very deep, well drained soils that formed in alluvium over lacustrine sands. Appian soils are on lake plain terraces. Slopes are 0 to 2 percent. The

mean annual precipitation is about 5 inches and the mean annual temperature is about 53 degrees F.

Taxonomic class: Fine-loamy over sandy or sandy-skeletal, mixed, mesic Typic Natrargids

Typical pedon: Appian loam located in an area of map unit 1360. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; light gray (2.5Y 7/2) loam, dark grayish brown (2.5Y 4/2) moist; moderate medium and coarse platy structure; hard, friable, slightly sticky and slightly plastic; common fine and very fine roots; many fine and medium vesicular and common fine and very fine interstitial pores; strongly effervescent; strongly alkaline (pH 8.8); abrupt smooth boundary.

A2--3 to 9 inches; light gray (2.5Y 7/2) loam, dark grayish brown (2.5Y 4/2) moist; weak fine granular structure; slightly hard, very friable, sticky and slightly plastic; common fine, very fine and few medium roots; common fine tubular and interstitial pores; strongly effervescent; strongly alkaline (pH 8.7); abrupt smooth boundary.

Btn--9 to 12 inches; light brownish gray (2.5Y 6/2) clay loam, grayish brown (2.5Y 5/2) moist; moderate fine and medium prismatic structure; hard, friable, sticky and plastic; few fine, very fine and medium roots; common fine and very fine tubular pores; few thin clay films on faces of peds and lining pores; strongly effervescent; very strongly alkaline (pH 9.4); abrupt smooth boundary.

Btk--12 to 19 inches; light brownish gray (2.5Y 6/2) clay loam, grayish brown (2.5Y 5/2) moist; moderate medium and coarse prismatic structure; hard, firm, sticky and plastic; few fine and very fine roots; common fine tubular pores; few thin clay films on faces of peds and lining pores; few fine filaments of lime; strongly effervescent; very strongly alkaline (pH 9.6); abrupt smooth boundary.

2C1--19 to 27 inches; pale olive (5Y 6/3) loamy fine sand, olive (5Y 5/3) moist; single grain; loose, nonsticky and nonplastic; common fine interstitial pores; few fine distinct light olive brown (2.5Y 5/6) iron mottles; very strongly alkaline (pH 9.6); clear wavy boundary.

2C2--27 to 60 inches; pale yellow (5Y 7/3) sand, olive (5Y 5/3) moist; single grain; loose, nonsticky and nonplastic; common fine interstitial pores; few fine distinct light olive brown (2.5Y 5/6) iron mottles; very strongly alkaline (pH 9.6).

Type location: Elko County, Nevada; approximately 6 miles southeast of Tobar, Nevada in the Independence Valley; located in an unsectionized area 5 miles east of

the southeast corner of section 12, T.34 N., R.62 E.; (40 degrees, 50 minutes, 18 seconds north latitude and 114 degrees, 49 minutes, 02 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry; moist for short periods in winter and early spring, dry May through October.

Soil temperature: 53 to 57 degrees F.

Combined thickness of A and Btn horizons: 7 to 19 inches.

Depth to sandy 2C horizon: 7 to 19 inches.

A horizons:

Hue--10YR or 2.5Y.

Value--6 or 7 dry, 3 or 4 moist.

Chroma--1 or 2.

Reaction--Moderately alkaline or strongly alkaline.

Btnk horizon:

Hue--10YR, 7.5YR, or 2.5Y.

Value--4 through 6 dry, 4 or 5 moist.

Chroma--2 through 4.

Texture--Dominantly clay loam with sandy clay loam common in some pedons.

Clay content--27 to 35 percent.

Exchangeable sodium--20 to 50 percent.

Structure--Moderate or strong, fine through coarse, columnar or prismatic; parting to subangular blocky in some pedons.

Consistence--Hard to very hard dry; friable or firm moist.

Reaction--Strongly alkaline or very strongly alkaline.

Other features--Few or common, fine or medium white lime or gypsum segregations and filaments.

Subhorizons in some pedons lack secondary lime.

2C horizons:

Hue--5Y, 2.5Y, 10YR or 7.5YR.

Value--6 or 7 dry, 3 through 5 moist.

Chroma--2 or 3.

Texture--Stratified; predominantly sand with strata of coarse sand, fine sand, loamy sand, loamy fine sand, fine sandy loam, or sandy loam.

Structure--Massive or single grain.

Consistence--Loose to slightly hard.

Rock fragments--5 to 15 percent pebbles; thin strata with up to 75 percent pebbles in some pedons.

Relict iron mottles--Few to many, fine to large, faint to prominent high chroma with hue of 10YR, 7.5YR or 5YR.

Reaction--Mildly alkaline to very strongly alkaline.

Effervescence--Noneffervescent to violently effervescent.

Armespan Series

The Armespan series consists of very deep, well drained soils that formed in mixed alluvium. Armespan soils are on fan piedmont remnants and beach plains. Slopes are 2 to 15 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 53 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Durixerollic Calciorthids

Typical pedon: Armespan very gravelly sandy loam, located in an area of map unit 1580. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 40 percent pebbles.

A1--0 to 7 inches; light gray (10YR 7/2) very gravelly sandy loam, brown (10YR 5/3) moist; moderate thin platy structure; soft, very friable, sticky and slightly plastic; common very fine, fine, and few medium and coarse roots; many interstitial and few very fine vesicular pores; 35 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

Bk1--7 to 11 inches; pale brown (10YR 6/3) gravelly loam, yellowish brown (10YR 5/4) moist; moderate coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, and few medium and coarse roots; many interstitial and few very fine tubular pores; few 2 millimeter thick lime coating and pendants on undersides of pebbles; 30 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bk2--11 to 21 inches; white (10YR 8/2) gravelly loam, very pale brown (10YR 7/4) moist; moderate coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many interstitial and common very fine tubular pores; many 2 millimeter thick lime coating and pendants on undersides of pebbles; many coarse soft masses of lime; 30 percent pebbles; violently effervescent; strongly alkaline (pH 8.8); clear wavy boundary.

Bqk--21 to 32 inches; pale brown (10YR 6/3) very gravelly coarse sandy loam, yellowish brown (10YR 5/4) moist; weak coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many interstitial pores; common 2 millimeter thick lime and silica coats and pendants on

undersides of pebbles; 30 percent discontinuous silica and lime cementations; few fine soft masses of lime; 55 percent pebbles; violently effervescent; strongly alkaline (pH 9.0); clear wavy boundary.

C--32 to 60 inches; pale brown (10YR 6/3) very gravelly loamy coarse sand, brown (10YR 5/3) moist; massive; hard, friable, nonsticky and nonplastic; few very fine roots; many interstitial pores; many 2 millimeter thick lime coating and pendants on undersides of rock fragments; few fine soft masses of lime; 55 percent pebbles; violently effervescent; strongly alkaline (pH 8.8).

Type location: Elko County, Nevada; approximately 3 miles southeast of Ferguson Springs Maintenance Station; 1,600 feet south and 1,500 feet west of the northeast corner of section 15, T.29 N., R.69 E.; (40 degrees, 23 minutes, 15 seconds north latitude and 114 degrees, 10 minutes, 06 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall except for 10 to 20 days cumulative between July and October due to convection storms.

Soil temperature: 53 to 59 degrees F.

Depth to Bk horizon: 4 to 10 inches.

Thickness of calcic horizon: 15 to 35 inches.

Control section:

Clay content--10 to 18 percent.

Rock fragments--Averages 35 to 60 percent.

Reaction--Moderately alkaline or strongly alkaline.

Effervescence--Strongly effervescent or violently effervescent throughout.

A horizon:

Value--6 or 7 dry, 4 through 6 moist.

Chroma--2 or 3.

Bk horizons:

Value--6 through 8 dry, 5 through 7 moist.

Chroma--2 through 4 dry or moist.

Texture--Sandy loam or loam.

Consistence--Soft or slightly hard dry, very friable or friable moist, nonsticky or slightly sticky and nonplastic or slightly plastic, wet.

Clay content--12 to 18 percent.

Rock fragments--15 to 35 percent, dominantly pebbles.

Structure--Massive, weak to moderate platy or subangular blocky.

Secondary lime accumulation--Soft powdery lime throughout horizon. Some pedons have few to many

2 millimeter lime coating and pendants on underside of pebbles.

Calcium carbonate equivalent--10 to 35 percent.

Bqk horizon:

Value--6 through 8 dry, 5 through 7 moist.

Chroma--2 through 4 dry or moist.

Texture--Sandy loam, coarse sandy loam.

Clay content--10 to 18 percent.

Rock fragments--35 to 60 percent, predominantly pebbles.

Calcium carbonate equivalent--(less than 20 millimeter fraction) 10 to 35 percent.

Consistence--Loose to hard, dry; loose to friable, moist; nonsticky to slightly sticky and nonplastic to slightly plastic wet.

Other features--20 to 50 percent weak to strong discontinuous silica-lime cementation as plates and pendants on undersides of rock fragments. Some pedons have few fine soft masses of lime.

C horizon:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 3 dry or moist.

Texture--Loamy sand, loamy coarse sand.

Clay content--5 to 10 percent.

Rock fragments--35 to 60 percent, predominantly pebbles.

Structure--Massive or single grain.

Other features--Lime pendants on undersides of rock fragments. Some pedons have few fine soft masses of lime.

Consistence--Loose to hard, dry; loose to friable, moist.

Atlow Series

The Atlow series consists of shallow, well drained soils that formed in residuum from rhyolite and andesite. Atlow soils are on hills. Slopes are 4 to 50 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Lithic Xerollic Haplargids

Typical pedon: Atlow very gravelly loam located in an area of map unit 620. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 35 percent pebbles, 15 percent cobbles, and 1 percent stones.

A1--0 to 1 inches; light gray (10YR 7/2) very gravelly loam, dark grayish brown (10YR 4/2) moist; moderate thin

platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and few fine to coarse roots; many very fine and fine vesicular pores; 35 percent pebbles and 10 percent cobbles; moderately alkaline (pH 8.4); clear smooth boundary.

A2--1 to 5 inches; light gray (10YR 7/2) very gravelly loam, dark grayish brown (10YR 4/2) moist; moderate fine subangular blocky structure parting to strong very fine granular; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and few fine to coarse roots; common very fine tubular pores; 30 percent pebbles and 10 percent cobbles; moderately alkaline (pH 8.4); clear wavy boundary.

Bt1--5 to 10 inches; very pale brown (10YR 7/3) very cobbly clay loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine and few fine to coarse roots; common very fine tubular pores; common thin clay films lining pores and on faces of peds; 25 percent pebbles, 15 percent cobbles, and 5 percent stones; moderately alkaline (pH 8.4); abrupt wavy boundary.

Bt2--10 to 18 inches; very pale brown (10YR 7/3) very cobbly clay loam, yellowish brown (10YR 5/4) moist; weak fine subangular blocky structure; slightly hard, very friable, sticky and plastic; few very fine to coarse roots; common very fine tubular pores; common thin clay films lining pores and on faces of peds; 25 percent pebbles, 20 percent cobbles, and 5 percent stones; thin lime pendants on undersides of rock fragments; strongly alkaline (pH 8.6); abrupt wavy boundary.

R--18 inches; andesite; few fine roots in fractures.

Type location: Elko County, Nevada; approximately 700 feet north and 1,150 feet west of the southeast corner of section 13, T.26 N., R.61 E.; (40 degrees, 07 minutes, 28 seconds north latitude and 115 degrees, 02 minutes, 22 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist mid fall through spring, dry summer through early fall. Xeric Aridic soil moisture regime.

Soil temperature: 48 to 52 degrees F.

Solum thickness: 14 to 20 inches.

Depth to bedrock: 14 to 20 inches.

A horizons:

Value--6 or 7 dry, 3 through 5 moist.

Chroma--2 or 3.

Reaction--Mildly alkaline or moderately alkaline.

Bt horizons:

Value--5 through 7 dry, 4 or 5 moist.

Chroma--2 through 4.

Texture--Very gravelly clay loam, or very cobbly clay loam or very gravelly sandy clay loam.

Clay content--27 to 35 percent.

Rock fragments--35 to 50 percent, dominantly pebbles and cobbles.

Structure--Angular blocky, subangular blocky.

Reaction--Moderately alkaline or strongly alkaline.

Secondary lime accumulation--The matrix is noncalcareous. Thin lime coatings are on the underside of rock fragments.

Consistence--Slightly hard or hard, slightly sticky or sticky, slightly plastic or plastic.

Automal Series

The Automal series consists of very deep, well drained soils that formed in alluvium from limestone, dolomite, and shale. Automal soils are on fan piedmont remnants and beachplains. Slopes are 2 to 50 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Durixerollic Calciorthids

Typical pedon: Automal gravelly silt loam, located in an area of map unit 504. (Colors are for dry soils unless otherwise noted.) The soil surface is partially covered with approximately 35 percent pebbles.

A1--0 to 2 inches; light brownish gray (10YR 6/2) gravelly silt loam, dark grayish brown (10YR 4/2) moist; moderate thin platy structure parting to weak fine subangular blocky; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and few fine through coarse roots; many very fine vesicular pores; 15 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

A2--2 to 4 inches; light brownish gray (10YR 6/2) gravelly silt loam; brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and few fine through coarse roots; common very fine tubular pores; 15 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

AB--4 to 6 inches; light brownish gray (10YR 6/2) gravelly silt loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, sticky and slightly plastic; common very fine and few fine through coarse roots; common very fine tubular

pores; many thin lime pendants on undersides of pebbles; 20 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

Bk--6 to 8 inches; pale brown (10YR 6/3) very gravelly silt loam; dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; slightly hard, very friable, sticky and slightly plastic; common very fine and few fine through medium roots; common very fine tubular pores; many thin to moderately thick lime pendants on undersides of rock fragments; 40 percent pebbles, 10 percent cobbles, 5 percent stones; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

2Bqk1--8 to 29 inches; very pale brown (10YR 7/3) extremely gravelly sandy loam, brown (10YR 5/3) moist; massive; very hard, very firm and brittle, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; 40 percent discontinuous strong lime cementation in vertical bands; continuous brittle matrix; many thin to moderately thick lime pendants on undersides of rock fragments; 55 percent pebbles, 10 percent cobbles, and 5 percent stones; violently effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

2Bqk2--29 to 49 inches; pale brown (10YR 6/3) very gravelly sandy loam, brown (10YR 4/3) moist; massive; hard, firm and brittle, slightly sticky and slightly plastic; many very fine tubular pores; 10 percent discontinuous strong lime and silica cementation in vertical bands; continuous brittle matrix; common thin to moderately thick lime pendants on undersides of rock fragments; common fine soft masses of lime; 55 percent pebbles; violently effervescent; strongly alkaline (pH 8.9); clear wavy boundary.

3Bqk--49 to 60 inches; pale brown (10YR 6/3) extremely gravelly loamy coarse sand, brown (10YR 4/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; common very fine interstitial pores; 50 percent discontinuous weak lime and silica cementation; common thin to moderately thick lime pendants on undersides of rock fragments; 70 percent pebbles and 5 percent stones; violently effervescent; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; approximately 10 miles south of Currie, about 3,200 feet south and 2,400 feet east of the northwest corner of section 17, T.26 N., R.64 E.; (40 degrees, 07 minutes, 35 seconds north latitude and 114 degrees, 46 minutes, 48 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry June through October. Xeric Aridic soil moisture regime.

Soil temperature: 47 to 52 degrees F.

Depth to calcic horizon: 5 to 12 inches.

Depth to continuous brittle matrix: 5 to 20 inches.

Reaction: Moderately alkaline or strongly alkaline.

Control section:

Clay content--3 to 20 percent.

Rock fragments--50 to 80 percent, of which 40 to 60 percent are pebbles and 10 to 20 percent are cobbles and stones.

A horizons:

Value--6 or 7; 4 or 5 moist.

Chroma--2 through 4.

Bk horizon:

Chroma--3 or 4.

Texture--Sandy loam and silt loam. Some pedons have coarse sandy loam in the lower part.

Consistence--Very friable or friable

Other features--Some pedons have few lime and silica cemented concretions.

Bqk horizons:

Value--6 through 8 dry; 4 through 6 moist.

Chroma--2 through 4.

Consistence--Hard or very hard, firm or very firm; slightly hard and very friable in lower subhorizons of some pedons.

Belsac Series

The Belsac series consists of moderately deep, well drained soils that formed in residuum and colluvium from siltstone, limestone and dolomite. Belsac soils are on mountains. Slopes are 15 to 50 percent. The mean annual precipitation is about 16 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, mixed Pachic Cryoborolls

Typical pedon: Belsac very gravelly loam in an area of map unit 140. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 40 percent pebbles and 5 percent cobbles.

- A1--0 to 4 inches; dark gray (10YR 4/1), very gravelly loam, black (10YR 2/1) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine and common medium roots; 35 percent pebbles; mildly alkaline (pH 7.4); clear wavy boundary.
- A2--4 to 9 inches; dark gray (10YR 4/1) very gravelly loam, very dark brown (10YR 2/2) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine and common medium roots; few thin strongly effervescent lime coating on undersides of pebbles; 35 percent pebbles; neutral (pH 7.2); clear wavy boundary.
- A3--9 to 21 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine and few medium roots; few thin strongly effervescent lime coating on undersides of pebbles; 40 percent pebbles; neutral (pH 7.2); clear wavy boundary.
- Bk--21 to 35 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine and few medium roots; 1 to 2 millimeter thick lime coating and pendants on undersides of pebbles; 55 percent pebbles; strongly effervescent; moderately alkaline (pH 8.2); clear wavy boundary.
- Cr--35 inches; fractured siltstone with lime coating along fractures.

Type location: Elko County, Nevada; about 21 miles east of Wells, Nevada; approximately 1,000 feet south and 2,500 feet west of the northeast corner of section 1, T.37 N., R.65 E.; (41 degrees, 07 minutes, 22 seconds north latitude and 114 degrees, 34 minutes, 20 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually moist, dry late July to October.

Soil temperature: 40 to 45 degrees F.

Summer soil temperature: 55 to 59 degrees F.

Mollic epipedon thickness: 20 to 40 inches.

Depth to bedrock: 25 to 40 inches.

Depth to lime accumulation: 20 to 25 inches.

Control section:

Clay content--18 to 25 percent.

Rock fragments--Averages 35 to 60 percent, mainly pebbles with up to 10 percent cobbles.

A horizons:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--1 through 3 moist.

Reaction--Neutral or mildly alkaline.

Other features--Few thin lime coats are common on rock fragments in lower subhorizon above the Bk horizon.

Bk horizon:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--2 or 3 moist.

Structure--Fine through coarse subangular blocky

Consistence--Soft or slightly hard dry.

Reaction--Mildly alkaline or moderately alkaline.

Effervescence--Strongly effervescent or violently effervescent.

Calcium carbonate equivalent--2 to 10 percent.

Benin Series

The Benin series consists of very deep, well drained soils that formed in mixed alluvium over lacustrine sediments. Benin soils are on lake plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Fine, montmorillonitic (calcareous), mesic Typic Torriorthents

Typical pedon: Benin silty clay loam, located in an area of map unit 1240. (Colors are for dry soil unless otherwise noted.)

- A1--0 to 4 inches; light gray (5Y 7/1) silty clay loam, light olive gray (5Y 6/2) moist; strong very thick platy structure parting to moderate medium; hard, friable, very sticky and very plastic; few very fine vesicular pores; strongly effervescent; very strongly alkaline (pH 9.4); clear smooth boundary.
- A2--4 to 7 inches; light gray (5Y 7/1) silty clay, light olive gray (5Y 6/2) moist; moderate thin platy structure; slightly hard, very friable, very sticky and very plastic; few very fine and fine roots; common very fine vesicular and tubular pores; strongly effervescent; very strongly alkaline (pH 9.4); clear smooth boundary.
- 2Ck--7 to 20 inches; light gray (5Y 7/2) silty clay, light olive gray (5Y 6/2) moist; strong coarse prismatic structure parting to very fine granular; slightly hard, friable, very sticky and very plastic; common very fine to medium roots; common very fine and few fine tubular pores; strongly effervescent; very strongly alkaline (pH 9.4); gradual smooth boundary.
- 2Ckn--20 to 41 inches; light gray (5Y 7/2) silty clay, light olive gray (5Y 6/2) moist; strong coarse prismatic structure parting to very fine granular; slightly hard,

friable, very sticky and very plastic; few fine roots; few fine tubular pores; few gypsum soft masses; many lime coating on faces of peds; strongly effervescent; very strongly alkaline (pH 9.4); clear smooth boundary.

3C--41 to 60 inches; light gray (5Y 7/2) silty clay, light olive gray (5Y 6/2) moist; strong coarse prismatic structure parting to very fine angular blocky; slightly hard, friable, very sticky and very plastic; few fine roots; few fine tubular pores; strongly effervescent; very strongly alkaline (pH 9.4); clear smooth boundary.

Type location: Elko County, Nevada; approximately 7 miles west of Hogan Tunnel in the south end of Independence Valley, about 450 feet east and 720 feet south of the northwest corner of section 13, T.33 N., R.64 E.; (40 degrees, 44 minutes, 39 seconds north latitude and 114 degrees, 41 minutes, 52 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, but is intermittently moist in winter and spring and dry in summer and fall.

Soil temperature: 47 to 52 degrees F.

Depth to lacustrine materials: 1 to 10 inches.

Other features--Electrical conductivity is 4 to 32mmhos.

SAR--15 to 60 at some depth between 1 to 36 inches.

A horizon:

Value--6 or 7 dry.

Chroma--1 or 2.

Reaction--Moderately alkaline to very strongly alkaline.

Effervescence--Noneffervescent to strongly effervescent.

2Ckn, 2C, and 3C horizons:

Hue--10YR, 2.5Y or 5Y.

Value--6 through 8 dry, 4 through 6 moist.

Chroma--2 or 3.

Texture--Silty clay or clay.

Structure--Weak through strong, medium or coarse prismatic that commonly parts to strong medium or coarse angular blocky or angular, or is massive.

Reaction--Moderately alkaline to strongly alkaline.

Other features--Some pedons have few to many silica coating on faces of peds. Gypsum is common in some subhorizon of most pedons. Some pedons have up to 10 percent durinodes.

Bijorja Series

The Bijorja series consists of moderately deep, well drained soils that formed in residuum and colluvium from granitic rocks. Bijorja soils are on hills. Slopes are 8 to 30 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 53 degrees F.

Taxonomic class: Coarse-loamy, mixed, mesic Xerollic Camborthids

Typical pedon: Bijorja gravelly sandy loam, located in an area of map unit 440. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by 20 percent pebbles.

A--0 to 4 inches; pale brown (10YR 6/3) gravelly sandy loam, dark brown (10YR 3/3) moist; strong thick platy structure; slightly hard, very friable, nonsticky and nonplastic; common very fine and few fine roots; common very fine and fine vesicular and few very fine tubular pores; 20 percent pebbles; mildly alkaline (pH 7.6); abrupt smooth boundary.

Bw--4 to 10 inches; pale brown (10YR 6/3) gravelly sandy loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; common very fine, fine, few medium and coarse roots; few very fine vesicular pores; 15 percent pebbles; mildly alkaline (pH 7.6); clear smooth boundary.

Bk1--10 to 15 inches; pale brown (10YR 6/3) gravelly sandy loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common very fine, few fine and medium roots; few very fine and fine vesicular pores; few thin lime coating on undersides of pebbles; 20 percent pebbles; strongly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

Bk2--15 to 25 inches; light gray (2.5Y 7/2) gravelly sandy loam, brown (10YR 5/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine roots; common very fine and few fine vesicular pores; 15 percent discontinuous weak lime cementation; few thin lime coating on undersides of coarse fragments; 30 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.

Cr--25 inches; decomposed granitic bedrock.

Type location: Elko County, Nevada; approximately 17 miles northwest of Wendover, Nevada; about 400 feet south and 1,800 feet east of the northwest corner of

section 22, T.35 N., R.68 E.; (40 degrees, 54 minutes, 18 seconds north latitude, and 114 degrees, 16 minutes, 40 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall, except for 10 to 20 days cumulative between July and October due to convection storms.

Soil temperature: 53 to 57 degrees F.

Depth to soft rock: 20 to 40 inches.

Control section:

Clay content--10 to 18 percent.

Rock fragments--15 to 35 percent over one-half of which are 2 to 5 millimeter diameter pebbles.

A horizon:

Value--5 or 6 dry, 3 or 4 moist.

Chroma--2 or 3 dry or moist.

Reaction--Neutral or mildly alkaline.

Bw horizon:

Value--3 or 4 moist

Chroma--3 or 4 dry or moist.

Consistence--Soft or slightly hard dry, nonsticky or slightly sticky wet.

Reaction--Neutral to moderately alkaline.

Bk horizons:

Structure--Massive or subangular blocky.

Consistence--Soft or slightly hard dry.

Effervescence--Strongly effervescent or violently effervescent.

Reaction--Mildly alkaline or moderately alkaline.

Blimo Series

The Blimo series consists of very deep, well drained soils that formed in mixed alluvium. Blimo soils are on beach plains and fan skirts. Slopes are 0 to 8 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Coarse-loamy, mixed (calcareous), mesic Durorthic Xeric Torriorthents

Typical pedon: Blimo silt loam in an area of map unit 847. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 5 percent pebbles.

A1--0 to 3 inches; light gray (10YR 7/2) silt loam, dark grayish brown (10YR 4/2) moist; weak medium platy

structure; soft, very friable, nonsticky and nonplastic; common very fine roots; many very fine and fine vesicular and tubular pores; violently effervescent; moderately alkaline (pH 7.9); abrupt smooth boundary.

A2--3 to 7 inches; light gray (10YR 7/2) sandy loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and common fine, medium and coarse roots; many very fine interstitial pores; 10 percent pebbles; thin lime coating on undersides of pebbles; violently effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary.

Bk--7 to 12 inches; very pale brown (10YR 7/3) gravelly sandy loam, brown (10YR 5/3) moist; weak coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and common fine, medium and coarse roots; many very fine interstitial pores; 15 percent pebbles; thin lime coating on undersides of pebbles; violently effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary.

Bqk1--12 to 16 inches; very pale brown (10YR 7/3) gravelly sandy loam, brown (10YR 5/3) moist; weak coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and common fine and medium roots; common very fine interstitial and tubular pores; 30 percent discontinuous weak silica cementation in vertical bands with 10 percent durinodes; 15 percent pebbles; thin lime coating on undersides of pebbles; violently effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary.

Bqk2--16 to 25 inches; white (10YR 8/2) gravelly sandy loam, light yellowish brown (10YR 6/4) moist; massive; hard, firm and brittle, nonsticky and nonplastic; common very fine and few fine and medium roots; many very fine tubular pores; continuous brittle matrix 30 percent durinodes 10 to 20 millimeters in diameter; 15 percent pebbles; thin lime coating on undersides of pebbles; violently effervescent; strongly alkaline (pH 8.6); abrupt wavy boundary.

Bqk3--25 to 40 inches; white (10YR 8/2) gravelly sandy loam, light yellowish brown (10YR 6/4) moist; massive; hard, firm and brittle, nonsticky and nonplastic; common very fine and few fine and medium roots; many very fine interstitial and tubular pores; continuous brittle matrix; 15 percent pebbles; moderately thick to thick lime and silica coating and few pendants on pebbles; violently effervescent; strongly alkaline (pH 9.0); clear wavy boundary.

Bqk4--40 to 55 inches; white (10YR 8/2) gravelly coarse sandy loam, light yellowish brown (10YR 6/4) moist; massive; slightly hard, very friable, nonsticky and nonplastic; common very fine roots; many very fine interstitial and tubular pores; 20 percent discontinuous

weak silica cementation; 15 percent pebbles; moderately thick to thick lime and silica coating and few pendants on pebbles; violently effervescent; strongly alkaline (pH 8.8); abrupt wavy boundary.

Bqk5--55 to 60 inches; white (10YR 8/2) extremely gravelly loamy coarse sand, light yellowish brown (10YR 6/4) moist; massive; very friable, nonsticky and nonplastic; common very fine roots; many very fine and fine interstitial pores; 40 percent discontinuous weak silica cementation; 70 percent pebbles; thick lime coating on undersides of pebbles; violently effervescent; strongly alkaline (pH 8.8).

Type location: Elko County, Nevada; approximately 1,900 feet north and 2,000 feet west of the southeast corner of section 6, T.29 N., R.63 E.; (40 degrees, 25 minutes, 08 seconds north latitude and 114 degrees, 54 minutes, 31 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist late fall through early spring, dry mid spring through mid fall.

Soil temperature: 47 to 52 degrees F.

Calcium carbonate equivalent: 5 to 15 percent by weight of the 20 millimeter fraction, increasing with depth.

Depth to continuous brittle matrix: 10 to 25 inches.

Reaction: Mildly alkaline to strongly alkaline, increasing with depth

Cementation: Subhorizons not continuously brittle due to silica accumulation, contain 20 to 60 percent durinodes or are 20 to 50 percent discontinuous weakly silica cemented.

Control section:

Clay content--12 to 18 percent.

Rock fragments--15 to 35 percent.

A horizons:

Hue--7.5YR or 10YR.

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 3.

Bk horizon:

Hue--7.5YR or 10YR.

Value--6 through 8 dry, 4 or 5 moist.

Chroma--3 or 4.

Structure--Weak coarse subangular blocky or massive.

Texture--Sandy loam, fine sandy loam or coarse sandy loam.

Effervescence--Strongly effervescent or violently effervescent.

Bqk horizons:

Hue--7.5YR or 10YR.

Value--6 through 8 dry, 5 or 6 moist.

Chroma--2 through 4.

Structure--Subangular blocky or massive.

Texture--Stratified sandy loam, coarse sandy loam.

Other features--In some pedons the lower part of the profile contains strata that has 60 to 70 percent pebbles and textures of loamy coarse sand or sand.

Bobs Series

The Bobs series consists of shallow over lime cemented hardpan, well drained soils that formed in alluvium from limestone with a component of loess. Bobs soils are on fan piedmont remnants. Slopes are 2 to 15 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Loamy, carbonatic, frigid, shallow
Aridic Petrocalcic Palexerolls

Typical pedon: Bobs very gravelly loam 4 to 15 percent slopes, is located in an area of map unit 562. (Colors are for dry soils unless otherwise noted.) The soil surface is partially covered with approximately 40 percent pebbles.

A1--0 to 1 inch; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate thin platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine, few fine and medium roots; many very fine vesicular and few fine tubular pores; common thin lime pendants on undersides of pebbles; 20 percent calcium carbonate equivalent of the less than 20 millimeter fraction; 35 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

A2--1 to 8 inches; brown (10YR 5/3) very gravelly loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, few fine and medium roots; common very fine tubular pores; common thin lime pendants on undersides of pebbles; 30 percent calcium carbonate equivalent of the less than 20 millimeter fraction; 35 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

A3--8 to 13 inches; brown (10YR 5/3) gravelly silt loam; dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, few fine and medium

roots; common very fine interstitial pores; common thin to moderately thick lime pendants on undersides of pebbles; 35 percent calcium carbonate equivalent of the less than 20 millimeter fraction; 30 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.

Bkm1--13 to 34 inches; white (10YR 8/1) indurated lime hardpan, light gray (10YR 7/2) moist; massive; extremely hard, extremely firm and brittle; common very fine tubular pores; 35 percent krotovinas 1 to 12 inches in diameter of the horizon, that is composed of material the same as that in the 8 to 13 inch layer; 50 percent pebbles and 10 percent cobbles; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.

Type location: Elko County, Nevada; approximately 8 miles southeast of Odgers Ranch; 1,600 feet north and 1,000 feet east of the southwest corner of section 7, T.26 N., R.63 E.; (40 degrees, 08 minutes, 29 seconds north latitude and 114 degrees, 55 minutes, 04 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry; moist in the winter and spring, dry summer and fall. Xeric Aridic soil moisture regime.

Soil temperature: 44 to 47 degrees F.

Mollic epipedon thickness: 7 to 14 inches.

Depth to petrocalcic horizon: 10 to 20 inches.

Reaction: Moderately alkaline or strongly alkaline.

Control section:

Clay content--10 to 20 percent.

Calcium carbonate equivalent--20 to 40 percent of the less than 20 millimeter fraction.

Coarse fragments--15 to 35 percent, mainly pebbles, some of which are pan fragments.

A horizons:

Value--4 or 5 dry, 2 through 4 moist, 2 or 3 when mixed, value of 3.5 or less.

Chroma--1 through 3.

Bkm horizon:

Value--7.5YR or 10YR.

Value--6 through 8 dry, 5 through 7 moist.

Chroma--1 through 4.

Other features--Some pedons have 10 to 35 percent krotovinas 1 to 12 inches in diameter.

Boofuss Series

The Boofuss series consists of very deep, poorly drained soils that formed in mixed alluvium and lacustrine sediments. Boofuss soils are on lake plains and alluvial flats. Slopes are 0 to 2 percent. Mean annual precipitation is about 9 inches and mean annual temperature is about 46 degrees F.

Taxonomic class: Clayey over loamy, montmorillonitic (calcareous), mesic Typic Halaquepts

Typical pedon: Boofuss silty clay in an area of map unit 1441. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; white (10YR 8/1) silty clay, gray (10YR 6/1) moist; moderate fine granular structure; slightly hard, friable, sticky and plastic; many very fine and fine roots; many very fine interstitial pores; many salt crystals on faces of peds; violently effervescent; very strongly alkaline (pH 9.2); abrupt smooth boundary.

A2--3 to 10 inches; light gray (10YR 7/2) silty clay, pale brown (10YR 6/3) moist; strong coarse prismatic structure; hard, friable, very sticky and very plastic; few very fine roots; many very fine and fine tubular pores; common salt crystals on faces of peds; violently effervescent; very strongly alkaline (pH 9.2); clear wavy boundary.

Bk--10 to 27 inches; white (2.5Y 8/1) silty clay, light gray (10YR 7/2) moist; strong coarse prismatic structure; hard, friable, very sticky and very plastic; few very fine roots; many very fine and fine tubular pores; common salt crystals on faces of peds; violently effervescent; very strongly alkaline (pH 9.2); abrupt wavy boundary.

2Ckq1--27 to 47 inches; white (2.5Y 8/1) silt loam, light gray (2.5Y 7/2) moist; common fine distinct yellowish brown (10YR 5/6) mottles; weak medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine, fine and common medium tubular pores; common medium soft masses of lime and lime coating on faces of peds; few silica nodules 1 inch in diameter; violently effervescent; strongly alkaline (pH 9.0); clear wavy boundary.

2Ckq2--47 to 60 inches; white (2.5Y 8/1) silt loam, white (2.5Y 8/2) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine and fine tubular pores; few silica nodules 1 inch in diameter; violently effervescent; strongly alkaline (pH 9.0).

Type location: Elko County, Nevada; approximately 1 mile northeast of the Warm Creek Ranch; about 1,300 feet south and 2,400 feet east of the northwest corner

of section 7, T.33 N., R.62 E.; (40 degrees, 45 minutes, 35 seconds north latitude and 115 degrees, 01 minute, 03 seconds west longitude.)

Range in characteristics:

Soil moisture: A and B horizons are dry in mid-summer to early fall, underlying material is moist year round. The soil is saturated at depths of 1.0 to 2.5 feet most years from January to June.

Soil temperature: 47 to 52 degrees F.

Salinity: Greater than 16 millimhos/cm decreasing with depth.

Control section:

Clay content--35 to 50 percent in the upper part and 8 to 15 percent in the lower part.

Depth to contrasting layer--15 to 35 inches.

A horizons:

Hue--10YR, 2.5Y or 5Y.

Value--7 or 8 dry, 6 or 7 moist.

Chroma--1 through 3.

Reaction--Strongly alkaline or very strongly alkaline.

SAR--50 to 80.

Bk horizon:

Hue--10YR, 2.5Y or 5Y.

Value--7 or 8 dry, 6 or 7 moist.

Chroma--1 or 2.

Texture--Stratified silty clay loam, silty clay and clay.

Structure--Medium or coarse prismatic.

Consistence--Slightly hard or hard dry, friable to firm moist.

Clay content--35 to 50 percent.

Reaction--Strongly alkaline or very strongly alkaline.

SAR--50 to 80.

2Ckq horizon:

Hue--10YR or 2.5Y.

Value--7 or 8 dry, 6 through 8 moist.

Texture--Stratified fine sandy loam, loam and silt loam.

Structure--Platy, prismatic, subangular blocky or massive.

Consistence--Very friable or friable, moist.

Clay content--8 to 15 percent.

SAR--10 to 30 percent.

Other features--Some pedons have thin strata of coarse sand or sand below a depth of 50 inches.

Few to common silica nodules.

Bullump Series

The Bullump series consists of deep and very deep, well drained soils that formed in colluvium from rhyolite with a component of loess. Bullump soils are on mountains. Slopes are 15 to 75 percent. The mean annual precipitation is about 15 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Pachic Argixerolls

Typical pedon: Bullump very gravelly loam located in an area of map unit 1030. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 20 percent pebbles.

A1--0 to 3 inches; dark grayish brown (10YR 4/2) very gravelly loam, very dark brown (10YR 2/2) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and few fine roots; many very fine interstitial and tubular pores; 35 percent pebbles; mildly alkaline (pH 7.6); abrupt smooth boundary.

A2--3 to 10 inches; dark grayish brown (10YR 4/2) very gravelly loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and common fine and medium roots; many very fine interstitial and tubular pores; 45 percent pebbles; mildly alkaline (pH 7.6); abrupt smooth boundary.

Bt1--10 to 27 inches; dark grayish brown (10YR 4/2) very gravelly sandy clay loam, dark brown (10YR 3/3) moist; moderate coarse subangular blocky; slightly hard, friable, sticky and plastic; many very fine and common fine and medium roots; many very fine interstitial and tubular pores; few thin clay films lining pores; 35 percent pebbles; mildly alkaline (pH 7.6); clear smooth boundary.

Bt2--27 to 37 inches; dark grayish brown (10YR 4/2) very gravelly sandy clay loam, dark brown (10YR 3/3) moist; weak coarse subangular blocky structure; slightly hard, friable, sticky and plastic; many very fine and few fine and medium roots; many very fine interstitial and tubular pores; few thin clay films on faces of peds and lining pores; 35 percent pebbles; mildly alkaline (pH 7.6); clear smooth boundary.

Bt3--37 to 49 inches; brown (10YR 4/3) very gravelly sandy clay loam, dark yellowish brown (10YR 3/4) moist; weak coarse subangular blocky structure; slightly hard, friable, sticky and plastic; many very fine roots; many very fine interstitial pores; few thin clay films on

faces of peds and lining pores; 40 percent pebbles; mildly alkaline (pH 7.6); abrupt wavy boundary. R--49 inches; rhyolite.

Type location: Elko County, Nevada; located in the Dolly Varden Mountains; approximately 422 feet south and 1,530 feet west of the projected northeast corner of section 32, T.29 N., R.66 E.; (40 degrees, 21 minutes, 04 seconds north latitude and 114 degrees, 32 minutes, 37 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist in winter and early summer, dry late July to early October. Additional soil moisture may be supplied by lateral water movement in the lower part of the profile.

Soil temperature: 43 to 47 degrees F.

Mollic epipedon thickness: 20 to 40 inches and may include the upper part of the argillic horizon.

Reaction: Slightly acid through mildly alkaline.

Other features: Some pedons have a C horizon that is below 40 inches.

Depth to bedrock: 40 to 80 inches.

Control section:

Clay content--25 to 35 percent.

Rock fragments--35 to 55 percent, mainly pebbles with some cobbles.

A horizons:

Value--3 through 5 dry, 2 or 3 moist.

Chroma--1 through 3.

Other features--Organic matter 2 to 6 percent.

Bt horizons:

Hue--7.5YR or 10YR.

Value--4 through 6 dry, 2 through 4 moist.

Chroma--2 through 6.

Texture--Loam, clay loam, or sandy clay loam.

Clay content--25 to 35 percent.

Rock fragments--35 to 55 percent, mainly pebbles.

Structure--Fine through coarse subangular blocky or angular blocky.

Consistence--Slightly sticky or sticky and slightly plastic or plastic, wet.

Other features--Uncoated sand grains and few silt coats lining pores occur in some pedons. Some pedons have few distinct mottles or manganese stains on pebbles.

Cavehill series

The Cavehill series consists of moderately deep, well drained soils that formed in residuum and colluvium from limestone and dolomite. Cavehill soils are on mountains. Slopes are 15 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, frigid Typic Calcixerolls

Typical pedon: Cavehill very gravelly silt loam in an area of map unit 575. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 20 percent pebbles.

A1--0 to 4 inches; grayish brown (10YR 5/2) very gravelly silt loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; common very fine tubular and interstitial pores; 40 percent pebbles; slightly effervescent; moderately alkaline (pH 7.9); clear smooth boundary.

A2--4 to 12 inches; brown (10YR 5/3) very gravelly silt loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine and common medium roots; many very fine and fine tubular pores; few lime coats on undersides of rock fragments; 40 percent pebbles; strongly effervescent; moderately alkaline (pH 7.9); abrupt smooth boundary.

Bk--12 to 30 inches; pale brown (10YR 6/3) very gravelly loam, brown (10YR 4/3) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few medium roots; many very fine and common fine tubular pores; many moderately thick lime coats on undersides of rock fragments; 45 percent pebbles and 10 percent cobbles; violently effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary.

2R--30 inches; limestone

Type location: Elko County, Nevada; approximately 18 miles northwest of Currie, Nevada; about 800 feet south and 800 feet east of the northwest corner of section 33, T.31 N., R.63 E.; (40 degrees, 31 minutes, 38 seconds north latitude and 114 degrees, 52 minutes, 18 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually moist; dry from about mid July through mid October. Xeric Aridic soil moisture regime.

Soil temperature: 43 to 47 degrees F.

Mollic epipedon thickness: 12 to 20 inches.

Depth to bedrock: 20 to 40 inches.

Control section:

Carbonates--Averages 40 to 60 percent calcium carbonate equivalent with the upper part ranging from 15 to 50 percent and the lower part ranging from 50 to 80 percent.

Clay content--18 to 27 percent.

Rock fragments--35 to 60 percent, mainly pebbles and cobbles, with stones common in some pedons.

Reaction--Moderately alkaline or strongly alkaline.

A horizons:

Value--4 or 5 dry.

Chroma--2 or 3.

Effervescence--Effervescent after mixing to a depth of 7 inches in horizons above 10 inches and strongly or violently effervescent below 10 inches.

Other features--Thick lime pendants are on some rock fragments in the lower A horizon in some pedons.

Bk horizon:

Value--6 through 8 dry, 4 through 7 moist.

Chroma--2 or 3.

Rock fragments--Averages 35 to 60 percent.

Structure--Subangular blocky or it is massive.

Textures--Silt loam or loam.

Other features--Weak discontinuous lime cementation in most pedons and thin to thick lime pendants on undersides of rock fragments. Some pedons have thin subhorizons directly above the bedrock that are gravelly loam with 25 to 35 percent pebbles and cobbles.

Chen Series

The Chen series consists of shallow, well drained soils that formed in residuum from andesite and rhyolite. Chen soils are on mountains. Slopes are 8 to 50 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Lithic Argixerolls

Typical pedon: Chen very gravelly loam located in an area of map unit 680. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 40 percent pebbles, 15 percent cobbles, and 2 percent stones.

A--0 to 3 inches; grayish brown (10YR 5/2) very gravelly loam, very dark brown (10YR 2/2) moist; weak coarse platy parting to strong medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and common fine roots; common very fine and fine tubular and common very fine interstitial pores; 25 percent pebbles and 10 percent cobbles; neutral (pH 6.8); abrupt smooth boundary.

Bt1--3 to 6 inches; grayish brown (10YR 5/2) very cobbly clay, very dark grayish brown (10YR 3/2) moist; strong medium subangular blocky structure; hard, friable, very sticky and plastic; common very fine, fine, and few medium roots; common very fine and fine tubular pores; few thin clay films on faces of peds; 10 percent pebbles and 40 percent cobbles; neutral (pH 7.0); clear smooth boundary.

Bt2--6 to 16 inches; brown (10YR 4/3) very cobbly clay, dark brown (10YR 3/3) moist; moderate fine angular blocky structure; hard, friable, sticky and very plastic; common very fine, fine, and few medium roots; common very fine and fine tubular pores; common moderately thick clay films on faces of peds and few thin clay films lining pores; 15 percent pebbles, 35 percent cobbles; neutral (pH 6.8).

R--16 inches; fractured welded tuff.

Type location: Elko County, Nevada; about 6 miles north of Silver Zone Pass in the Toano Mountains; approximately 1,964 feet north and 132 feet east of an unsectionized area of the southwest corner of section 8, T.36 N., R.68 E.; (41 degrees, 00 minutes, 58 seconds north latitude and 114 degrees, 18 minutes, 48 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry summer and fall.

Soil temperature: 43 to 47 degrees.

Mollic epipedon thickness: 7 to 17 inches and generally includes all or the upper part of the argillic horizon.

Depth to bedrock: 12 to 20 inches.

Reaction: Slightly acid through mildly alkaline throughout.

A horizon:

Value--4 through 6 dry (less than 5.5 when the surface 7 inches are mixed), 2 or 3 moist.

Chroma--2 or 3.

Bt horizons:

Hue--7.5YR or 10YR with 5YR common in areas with high iron concentrations in the parent material.

Value--4 or 5 dry, 3 or 4 moist.

Chroma--2 through 4.

Texture--Clay, some pedons have thin Bt1 horizons with clay loam.

Clay content--Average 40 to 55 percent.

Rock fragments--40 to 65 percent pebbles and cobbles normally increasing with depth.

Structure--Weak to strong, fine or medium angular or subangular blocky or platy.

Chiara Series

The Chiara series consists of shallow to duripan, well drained soils that formed in loess high in volcanic ash over mixed alluvium. Chiara soils are on fan piedmont remnants. Slopes are 2 to 8 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is 48 degrees F.

Taxonomic class: Loamy, mixed, mesic, shallow Xerollic Durorthids

Typical pedon: Chiara silt loam, located in an area of map unit 279. (Colors are for dry soil unless otherwise noted.)

A--0 to 4 inches; light brownish gray (10YR 6/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine and fine vesicular pores; 5 percent pebbles; moderately alkaline (pH 8.2); clear smooth boundary.

Bqk--4 to 11 inches; light brownish gray (10YR 6/2) silt loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine, and few medium and coarse roots; common very fine and fine tubular pores; 30 percent brittle durinodes 1 inch in diameter; 5 percent pebbles; few thin lime filaments; slightly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary.

2Bqkm--11 to 60 inches; very pale brown (10YR 7/3) indurated duripan with continuous 2 millimeter thick laminar cap, yellowish brown (10YR 5/4) moist; massive; extremely hard, extremely firm; few fine and medium roots in fractures; violently effervescent; moderately alkaline.

Type location: Elko County, Nevada; approximately 4 1/2 miles east of the Ruby Valley Forest Service Station; about 1,000 feet north and 100 feet east of the southwest corner of section 19, T.33 N., R.61 E.; (40

degrees, 43 minutes, 20 seconds north latitude and 115 degrees, 08 minutes, 22 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry from summer and fall.

Soil temperature: 47 to 53 degrees F.

Depth to duripan: 10 to 20 inches.

Other features: Depth to lime is 4 to 15 inches.

Control section:

Clay content--5 to 18 percent.

Rock fragments--When mixed, up to 5 percent, mainly pebbles, thin subhorizons in some pedons have 4 to 25 percent, comprised mainly of duripan fragments.

Sand--Less than 15 percent fine sand and coarser.

A horizon:

Value--3 or 4 moist.

Chroma--2 or 3.

Reaction--Neutral to moderately alkaline.

Bqk horizon:

Value--6 or 7 dry, 3 through 5 moist.

Texture--Very fine sandy loam, loam or silt loam with 70 to 85 percent silt loam plus very fine sand.

Structure--Subangular blocky or is massive.

Consistence--Very friable or friable, moist; slightly sticky or nonsticky wet.

Cementation--Contains from 20 to 60 percent weakly cemented and brittle durinodes from 0.3 to 1 inch in diameter.

Reaction--Moderately alkaline to strongly alkaline.

Bqkm horizon:

Value--6 through 8 dry, 5 through 7 moist.

Chroma--2 through 4.

Structure--Massive or thick platy.

Other features--Stratified gravelly and sandy substratums occur below 40 inches in some pedons.

Cleavage Series

The Cleavage series consists of shallow, well drained soils that formed in residuum and colluvium from sandstone and conglomerate. Cleavage soils are on mountains. Slopes are 2 to 15 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Lithic Argixerolls

Typical pedon: Cleavage very gravelly loam in an area of map unit 400. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 70 percent pebbles and 5 percent cobbles.

A1--0 to 3 inches; brown (10YR 5/3) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine and common medium roots; many very fine interstitial and common very fine tubular pores; 55 percent pebbles; neutral (pH 7.2); abrupt smooth boundary.

A2--3 to 7 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine and common medium roots; many very fine interstitial and common very fine tubular pores; 50 percent pebbles; neutral (pH 7.2); abrupt smooth boundary.

Bt1--7 to 10 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine and medium roots; many very fine and fine tubular pores; common thin clay films as coats, bridging sand grains and lining pores; 50 percent pebbles; neutral (pH 7.2); clear wavy boundary.

Bt2--10 to 15 inches; light brownish gray (10YR 6/2) very gravelly clay loam, dark grayish brown (10YR 4/2) moist; moderate medium subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine, fine and medium roots; many very fine and fine tubular pores; common thin clay films coating mineral grains, bridging pebbles, on faces of peds, and lining pores; 55 percent pebbles; neutral (pH 7.2); abrupt wavy boundary.

R--15 inches; conglomerate bedrock.

Type location: Elko County, Nevada; about 21 miles east of Wells, Nevada; approximately 2,000 feet north and 1,500 feet west of the southeast corner of section 1, T.37 N., R.65 E.; (41 degrees, 07 minutes, 00 seconds north latitude and 114 degrees, 34 minutes, 10 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist in winter and spring, dry from July through October for 70 to 120 consecutive days.

Soil temperature: 44 to 47 degrees F.

Mollic epipedon thickness: 7 to 10 inches, does not include Bt horizon.

Depth to bedrock: 14 to 20 inches.

Control section:

Clay content--20 to 35 percent.

Rock fragments--50 to 80 percent, mostly pebbles or cobbles.

Reaction--Neutral or mildly alkaline.

A horizons:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--2 or 3.

Bt horizons:

Hue--7.5YR or 10YR.

Value--5 or 6 dry, 3 or 4 moist.

Chroma--2 through 4.

Texture--Clay loam, loam.

Structure--Subangular blocky or angular blocky or it is massive.

Consistence--Very friable to firm, moist, slightly hard to hard dry, slightly sticky or sticky and slightly plastic or plastic wet.

Cliffdown Series

The Cliffdown series consists of very deep, excessively drained soils that formed in mixed alluvium. Cliffdown soils are on beach plains. Slopes are 2 to 4 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 53 degrees F.

Taxonomic class: Loamy-skeletal, mixed (calcareous), mesic Typic Torriorthents

Typical pedon: Cliffdown very gravelly sandy loam in an area of map unit 1510. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 35 percent pebbles.

A1--0 to 2 inches; light brownish gray (10YR 6/2) very gravelly sandy loam, dark grayish brown (10YR 4/2) moist; moderate coarse platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine vesicular pores; 35 percent pebbles; strongly effervescent; strongly alkaline (pH 8.8); abrupt smooth boundary.

A2--2 to 6 inches; light brownish gray (10YR 6/2) very gravelly sandy loam, brown (10YR 4/3) moist; moderate coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, common fine and medium roots; many very fine interstitial and tubular pores; few thin lime coats on undersides of pebbles; 35 percent pebbles; strongly effervescent; strongly alkaline (pH 8.8); abrupt smooth boundary.

- C1--6 to 12 inches; light gray (10YR 7/2) very gravelly sandy loam, brown (10YR 5/3) moist; massive; soft, very friable, slightly sticky and slightly plastic; many very fine, common fine and medium roots; many very fine interstitial pores; few thin lime coats on undersides of rock fragments; 40 percent pebbles and 5 percent cobbles; violently effervescent; strongly alkaline (pH 8.9); clear smooth boundary.
- C2--12 to 20 inches; light gray (10YR 7/2) very gravelly sandy loam, brown (10YR 4/3) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, few fine roots; many very fine and fine interstitial pores; few thin lime coats on undersides of rock fragments; 40 percent pebbles and 5 percent cobbles; violently effervescent; strongly alkaline (pH 9.0); abrupt smooth boundary.
- C3--20 to 45 inches; light brownish gray (10YR 6/2) very gravelly sandy loam, dark grayish brown (10YR 4/2) moist; massive; soft, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine and fine interstitial pores; few thin lime coats on undersides of rock fragments; 45 percent pebbles and 5 percent cobbles; violently effervescent; strongly alkaline (pH 9.0); gradual wavy boundary.
- C4--45 to 60 inches; light brownish gray (10YR 6/2) very gravelly sandy loam, dark grayish brown (10YR 4/2) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine and fine interstitial pores; few thin lime coats on undersides of rock fragments; 50 percent pebbles; violently effervescent; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; approximately 15 miles south of Wendover, Nevada; about 2,800 feet south and 2,000 feet east of the northwest corner of section 6, T.31 N., R.70 E.; (40 degrees, 35 minutes, 17 seconds north latitude and 114 degrees, 06 minutes, 20 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in in some part for short periods during winter and early spring and for 10 to 20 days cumulative between July to October following convection storms. Typic Aridic soil moisture regime.

Soil temperature: 53 to 59 degrees F.

Effervescence: Slightly effervescent to strongly effervescent, violently effervescent with depth.

Reaction: Moderately alkaline or strongly alkaline.

Control section:

Clay content--5 to 15 percent.

Rock fragments--Average 35 to 50 percent.

A horizons:

Hue--10YR or 7.5YR.

Value--6 or 7 dry, 3 through 5 moist.

Chroma--2 through 4.

C horizons:

Texture--Stratified gravelly sandy loam to very gravelly fine sandy loam.

Consistence--Soft or slightly hard dry, nonsticky to slightly sticky and nonplastic to slightly plastic wet.

Other features--Some pedons have an A horizon with 1/2 unit of value darker than C horizon. Some pedons contain weak Bk horizons. Some pedons have few thin lime coats on pebbles.

Cobre Series

The Cobre series consists of moderately deep, well drained soils that formed in residuum from tuffs with a component of loess and ash. Cobre soils are on hills and fan piedmont remnants. Slopes are 4 to 15 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Ashy, mesic Vitrixerandic Camborthids

Typical pedon: Cobre silt loam in an area of map unit 240. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 10 percent pebbles.

A1--0 to 3 inches; light brownish gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist; weak coarse platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine and fine vesicular and tubular pores; 10 percent pebbles; slightly effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

A2--3 to 7 inches; light gray (10YR 7/2) silt loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, few fine, medium, and coarse roots; many very fine interstitial and tubular pores; few thin lime coats on undersides of pebbles; 10 percent pebbles; slightly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bw--7 to 15 inches; very pale brown (10YR 7/3) loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, few fine, medium and coarse roots; many very fine interstitial pores; few thin lime coats on undersides of pebbles; 10 percent

pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

2Bqk1--15 to 25 inches; white (10YR 8/2) fine sandy loam, pale brown (10YR 6/3); massive; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, few fine roots; common very fine tubular pores; 40 percent 5 to 30 millimeter diameter durinodes; common thin lime coats on undersides of pebbles; 10 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

2Bqk2--25 to 34 inches; very pale brown (10YR 8/3) fine sandy loam, pale brown (10YR 6/3) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and few fine roots; many very fine interstitial pores; few thin lime coats on undersides of pebbles; 10 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear irregular boundary.

Cr--34 to 40 inches; very pale brown (10YR 8/3) platy fractured tuff, light yellowish brown (10YR 6/4) moist.

Type location: Elko County, Nevada; approximately 16 miles northwest of Currie; 1,950 feet west and 1,600 feet north of the southeast corner of section, 23 T.30 N., R.62 E.; (40 degrees, 27 minutes, 44 seconds north latitude and 114 degrees, 56 minutes, 43 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry mid-June through late October for 70 to 100 consecutive days. Xeric Aridic

Soil temperature: 47 to 52 degrees F.

Depth to paralithic contact: 20 to 40 inches.

Reaction: Mildly alkaline or moderately alkaline.

Volcanic ash and glass aggregates: 65 to 80 percent.

Depth to horizons containing durinodes: 11 to 25 inches.

Control section:

Clay content--Averages 8 to 18 percent.

Rock fragments--0 to 15 percent, mainly ashy tuff pebbles.

Texture--Silt loam, loam or very fine sandy loam.

Clay content--15 to 25 percent.

A horizon:

Hue--10YR or 2.5Y.

Value--5 through 7 dry, 3 or 4 moist.

Chroma--2 or 3.

Effervescence--Noneffervescent or slightly effervescent.

Bw horizon:

Hue--10YR or 2.5Y.

Value--5 through 7 dry, 3 through 5 moist.

Chroma--2 or 3.

Texture--Silt loam, loam or very fine sandy loam.

Clay content--15 to 25 percent.

Rock fragments--0 to 15 percent, mainly ashy tuff pebbles.

Structure--Subangular blocky or angular blocky.

Effervescence--Noneffervescent to strongly effervescent.

Bq or Bqk horizons:

Hue--2.5Y, 5Y or 10YR.

Value--6 through 8 dry, 4 through 6 moist.

Chroma--2 or 3.

Texture--Sandy loam, fine sandy loam or loam.

Clay content--8 to 18 percent.

Rock fragments--Average 0 to 15 percent; some thin subhorizons range up to 25 percent ashy tuff pebbles.

Structure--Subangular blocky or it is massive.

Effervescence--Noneffervescent to strongly effervescent.

Cotant Series

The Cotant series consists of shallow, well drained soils that formed in residuum and colluvium from tuff. Cotant soils are on mountains. Slopes are 4 to 15 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Clayey, montmorillonitic, frigid, shallow Aridic Argixerolls

Typical pedon: Cotant gravelly clay loam in an area of map unit 1080. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 35 percent pebbles.

A--0 to 2 inches; grayish brown (10YR 5/2) gravelly clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium platy structure; slightly hard, very friable, sticky and plastic; common very fine and few fine roots; common very fine vesicular pores; 20 percent pebbles; mildly alkaline (pH 7.8); abrupt smooth boundary.

Bt1--2 to 8 inches; dark grayish brown (10YR 4/2) clay, very dark grayish brown (10YR 3/2) moist; moderate medium angular blocky structure; hard, friable, sticky

and very plastic; common very fine, few fine roots; common very fine tubular pores; many distinct clay films on faces of peds and lining pores; 5 percent pebbles; mildly alkaline (pH 7.8); abrupt smooth boundary.

Bt2--8 to 15 inches; grayish brown (10YR 5/2) clay, very dark grayish brown (10YR 3/2) moist; weak medium prismatic parting to strong medium angular blocky structure; hard, firm, very sticky and very plastic; few very fine roots; common very fine tubular pores; many distinct clay films on faces of peds and lining pores; 5 percent pebbles; mildly alkaline (pH 7.8); gradual smooth boundary.

Cr--15 to 40 inches; weathered tuffs.

Type location: Elko County, Nevada; approximately 1 mile northeast of Augustine Spring in the Cherry Creek Mountains; 1,900 feet west and 1,000 feet north of the southeast corner of section 7, T.28 N., R.63 E.; (40 degrees, 18 minutes, 52 seconds north latitude and 114 degrees, 54 minutes, 32 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually moist; moist in winter and spring, dry July through October. Aridic Xeric soil moisture regime.

Soil temperature: 42 to 47 degrees F.

Mollic epipedon thickness: 7 to 15 inches, including all or part of argillic horizon.

Depth to paralithic contact: 12 to 20 inches.

Reaction: Neutral or mildly alkaline.

A horizon:

Value--5 or 6 dry (5.5 or darker after mixing the surface 7 inches)

Chroma--2 or 3.

Bt horizons:

Value--4 through 6 dry, 3 through 5 moist. The upper subhorizon is 4 or 5 dry and 3 moist.

Chroma--2 through 4, with 4 only in the lower subhorizons.

Texture--Clay.

Clay content--40 to 60 percent.

Rock fragments--0 to 15 percent, mainly pebbles and cobbles; some pedons have subhorizons with up to 25 percent pebbles.

Structure--Prismatic, angular blocky or subangular blocky.

Other features--Darker crushed matrix values common in upper part of horizon.

Consistence--Very friable to firm, moist; sticky or very sticky and plastic or very plastic, wet.

Cropper Series

The Cropper series consists of well drained soils that formed in residuum and colluvium from rhyolite. Cropper soils are on mountains. Slopes are 15 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Lithic Argixerolls

Typical pedon: Cropper very cobbly loam, located in an area of map unit 430. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by 30 percent pebbles and 15 percent cobbles.

A--0 to 2 inches; grayish brown (10YR 5/2) very cobbly loam, very dark grayish brown (10YR 3/2) moist; moderate thick platy structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine and medium roots; common very fine tubular and interstitial pores; 35 percent pebbles and 20 percent cobbles; mildly alkaline (pH 7.6); abrupt wavy boundary.

A2--2 to 7 inches; brown (10YR 5/3) very cobbly loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine, fine and medium roots; common very fine tubular pores; few thin clay films on faces of peds; 35 percent pebbles and 20 percent cobbles; mildly alkaline (pH 7.6); clear wavy boundary.

Bt2--7 to 14 inches; brown (10YR 4/3) extremely gravelly clay loam, dark yellowish brown (10YR 3/4) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine, few medium and coarse roots; many very fine tubular pores; common thin clay films on faces of peds and lining pores; 40 percent pebbles and 20 percent cobbles; mildly alkaline (pH 7.8); abrupt smooth boundary.

R--14 inches; rhyolite.

Type location: Elko County, Nevada; approximately 7 miles north of Silver Zone Pass; located in an unsectionized area 2,600 feet east and 1,300 feet south of the northwest corner of section 31, T.37 N., R.68 E.;

(41 degrees, 03 minutes, 00 seconds north latitude and 114 degrees, 19 minutes, 25 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry for 70 to 120 consecutive days most years in the summer and fall. Xeric Aridic soil moisture regime.

Soil temperature: 44 to 47 degrees.

Mollic epipedon thickness: 7 to 10 inches, may include the upper part of the argillic horizon.

Depth to bedrock: 14 to 20 inches.

Control section:

Clay content--Averages 27 to 35 percent.

Reaction--Neutral or mildly alkaline.

Rock fragments--60 to 75 percent, by average, mainly pebbles.

A horizons:

Value--3 through 5 dry, 2 or 3 moist.

Chroma--1 through 3 moist or dry.

Bt horizon:

Hue--10YR or 7.5YR.

Value--3 or 4 dry, 2 or 3 moist.

Chroma--2 to 3 moist, or can be 4 moist in the lower part.

Structure--Subangular blocky or angular blocky.

Texture--Sandy clay loam or clay loam.

Consistence--Soft to hard, dry; very friable to firm, moist; slightly sticky to sticky, slightly plastic to plastic, wet.

Cucamungo Series

The Cucamungo series consists of shallow, well drained soils that formed in residuum and colluvium from granite. Cucamungo soils are on mountains. Slopes are 15 to 75 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid, shallow Typic Argixerolls

Typical pedon: Cucamungo very gravelly sandy loam in an area of map unit 471. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 20 percent pebbles, 30 percent cobbles, and 1 percent stones.

O--1 to 0 inch; singleleaf pinyon needle duff.

A1--0 to 1 inch; grayish brown (10YR 5/2) very gravelly sandy loam, very dark brown (10YR 2/2) moist; single grain; loose, non sticky and non plastic; many very fine roots; many very fine interstitial pores; 40 percent pebbles, 15 percent cobbles; mildly alkaline (pH 7.7); abrupt smooth boundary.

A2--1 to 3 inches; grayish brown (10YR 5/2) very gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; soft, very friable, non sticky and non plastic; many very fine, common fine roots; many very fine interstitial pores; 40 percent pebbles and 5 percent cobbles; mildly alkaline (pH 7.7); abrupt smooth boundary.

Bt1--3 to 7 inches; grayish brown (10YR 5/2) very gravelly sandy clay loam, very dark brown (10YR 2/2) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, common fine, medium and coarse roots; many very fine interstitial pores; few thin clay films on faces of peds, lining pores, and as coats on sand grains; 50 percent pebbles and 5 percent cobbles; mildly alkaline (pH 7.7); abrupt smooth boundary.

Bt2--7 to 14 inches; brown (10YR 5/3) very gravelly sandy clay loam, dark yellowish brown (10YR 3/4) moist; moderate medium subangular blocky structure; slightly hard, friable, sticky and plastic; many very fine, few fine, medium and coarse roots; many very fine tubular pores; few thin clay films on faces of peds, lining pores, and as coats on sand grains; 40 percent pebbles and 5 percent cobbles; mildly alkaline (pH 7.7); clear wavy boundary.

Cr--14 to 19 inches; weathered granite; common very fine, few fine roots matted on bedrock surface.

Type location: Elko County, Nevada; approximately 2 1/2 miles northwest of the Victoria Mine in the Dolly Varden Mountain range; located 1,600 feet east and 200 feet north of the southwest corner of section 36, T.29 N., R.65 E.; (40 degrees, 20 minutes, 22 seconds north latitude and 114 degrees, 35 minutes, 33 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually moist in winter, spring and early summer, dry in late summer and fall but moist intermittently due to convection storms. Dry in all parts at least 45 consecutive days following the summer solstice.

Soil temperature: 45 to 47 degrees F.

Mollic epipedon thickness: 7 to 14 inches (includes Bt1).

Depth to weathered bedrock: 14 to 20 inches.

Control section:

Clay content--20 to 30 percent.

Rock fragments--35 to 55 percent, mainly 2 to 5 mm.

Reaction--Neutral to moderately alkaline.

A horizon:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--2 or 3.

Bt1 horizon:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--2 or 3.

Texture--Sandy clay loam, loam, clay loam.

Bt2 horizon:

Value--4 through 6 dry, 3 or 4 moist.

Chroma--3 or 4.

Texture--Sandy clay loam, loam, clay loam.

Dacker Series

The Dacker series consists of moderately deep over a duripan, well drained soils that formed in mixed silty alluvium with loess high in volcanic ash. Dacker soils are on fan piedmont remnants. Slopes are 2 to 4 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 49 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Xerollic Durargids

Typical pedon: Dacker silt loam located in an area of map unit 231. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 45 percent pebbles.

A1--0 to 3 inches; light brownish gray (10YR 6/2) silt loam, dark brown (10YR 3/3) moist; moderate thin and medium platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine and few medium roots; common very fine vesicular and interstitial pores; 5 percent pebbles; mildly alkaline (pH 7.8); clear smooth boundary.

A2--3 to 6 inches; light brownish gray (10YR 6/2) silt loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine, medium, and coarse roots; common very fine and few fine and medium interstitial pores; 5 percent pebbles; mildly alkaline (pH 7.8); clear smooth boundary.

Bt1--6 to 11 inches; dark brown (10YR 4/3) silty clay loam,

dark yellowish brown (10YR 3/4) moist; strong medium prismatic structure parting to strong fine subangular; slightly hard, friable, sticky and plastic; common very fine and few fine, medium and coarse roots; common very fine and few fine interstitial and tubular pores; common thin clay films on faces of peds and lining pores; 10 percent pebbles; moderately alkaline (pH 8.2); clear smooth boundary.

Bt2--11 to 18 inches; dark yellowish brown (10YR 4/4) silty clay loam, dark yellowish brown (10YR 3/4) moist; strong medium prismatic structure; hard, friable, sticky and plastic; common very fine, few fine, medium and coarse roots; few very fine and fine interstitial and tubular pores; common thin clay films on faces of peds and lining pores; 10 percent pebbles; moderately alkaline (pH 8.2); gradual smooth boundary.

Bqk--18 to 24 inches; very pale brown (10YR 7/3) gravelly loam, yellowish brown (10YR 5/4) moist; weak thick platy structure parting to moderate medium subangular blocky structure; hard, friable, slightly sticky and plastic; few very fine and fine roots; 50 percent durinodes; 15 percent pebbles; few fine filaments of lime; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bqkm--24 to 49 inches; white (10YR 8/2) indurated duripan, pale brown (10YR 6/3) moist; massive; extremely hard, extremely firm; 10 percent pebbles; continuous laminae are 1 to 2 millimeter thick; violently effervescent; strongly alkaline; gradual wavy boundary.

Type location: Elko County, Nevada; about 1 mile east of Welcome; approximately 1,800 feet west and 200 feet south of the northeast corner of section 16, T.37 N., R.61 E.; (41 degrees, 05 minutes, 55 seconds north latitude and 115 degrees, 05 minutes, 10 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in the winter and spring, dry June through October. Xeric Aridic soil moisture regime.

Soil temperature: 47 to 52 degrees F.

Combined thickness of A and Bt: 17 to 25 inches.

Depth to carbonates: 15 to 25 inches.

Depth to duripan: 20 to 35 inches.

Control section:

Clay content--27 to 35 percent.

Rock fragments--5 to 35 percent, mainly pebbles.

Other features--Very gravelly loamy sand substratums are common in some pedons below a depth of 40 inches.

A horizons:

Value--5 or 6 dry; 3 or 4 moist.

Chroma--2 or 3.

Reaction--Neutral or mildly alkaline.

Bt horizons:

Value--4 through 7 dry, 3 through 5 moist.

Chroma--3 or 4.

Texture--Upper subhorizon is silty clay loam. Lower subhorizon is silt loam or silty clay loam.

Clay content--Upper subhorizons 27 to 35 percent, lower subhorizons 25 to 33 percent.

Rock fragments--Upper subhorizons 0 to 20 percent, lower subhorizons 5 to 35 percent.

Structure--Prismatic parting to subangular blocky, subangular blocky or may be massive in the lower part.

Consistence--Usually hard, slightly hard in subhorizons, very friable to firm moist; slightly sticky or sticky and slightly plastic or plastic, wet.

Reaction--Mildly alkaline or moderately alkaline.

Bqk horizons:

Value--6 or 7 dry, 3 through 5 moist.

Chroma--3 or 4.

Texture--Silt loam or loam.

Clay content--20 to 25 percent.

Consistence--Slightly hard or hard, very friable to firm, moist; slightly sticky or sticky and slightly plastic or plastic, wet.

Rock fragments--5 to 35 percent, mainly pebbles.

Structure--Massive or weak thick platy parting to subangular blocky.

Other features--20 to 50 percent, 5 to 30 millimeter durinodes or pan fragments.

Bqkm horizons:

Value--6 through 8 dry, 4 through 7 moist.

Chroma--2 through 4.

Reaction--Moderately alkaline or strongly alkaline.

Other features--Commonly has variable thickness of alternating layers of weak, strong or indurated silica-lime cemented material below.

Devilsgait Series

The Devilsgait series consists of very deep, very poorly drained soils that formed in mixed silty alluvium with a component of loess high in ash. Devilsgait soils are on flood plains and lake plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Fine-silty, mixed (calcareous), mesic Cumulic Endoaquolls

Typical pedon: Devilsgait silt loam located in Elko County, Nevada, Northeast Part map unit 480. (Colors are for dry soils unless otherwise noted.)

A1--0 to 2 inches; dark gray (10YR 4/1) silt loam, very dark gray (10YR 3/1) moist; common fine distinct yellowish red (5YR 4/6) moist mottles; moderate medium platy structure; slightly hard, very friable, sticky and slightly plastic; common very fine and fine roots; common very fine tubular pores; moderately alkaline (pH 8.2); abrupt smooth boundary.

A2--2 to 9 inches; dark gray (10YR 4/1) silt loam, black (10YR 2/1) moist; common fine distinct strong brown (7.5YR 4/6) moist mottles; moderate medium subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine and fine, few medium and coarse roots; common very fine tubular pores; slightly effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

A3--9 to 12 inches; dark gray (10YR 4/1) silty clay loam, black (10YR 2/1) moist; common fine distinct strong brown (7.5YR 4/6) moist mottles; moderate fine and medium subangular blocky structure; hard, friable, sticky and very plastic; common very fine and fine, and few medium roots; common very fine tubular pores; slightly effervescent; strongly alkaline (pH 9.0); clear wavy boundary.

A4--12 to 24 inches; gray (10YR 5/1) silty clay loam, black (10YR 2/1) moist; common fine distinct yellowish red (5YR 4/6) moist mottles; moderate fine prismatic structure parting to moderate fine subangular blocky; hard, firm, very sticky and very plastic; common very fine and fine roots; common very fine tubular pores; violently effervescent in lime seams; common medium lime seams and masses; strongly effervescent matrix; strongly alkaline (pH 8.6); abrupt wavy boundary.

A5--24 to 31 inches; gray (10YR 5/1) silty clay loam, black (10YR 2/1) moist; common fine distinct yellowish red (5YR 4/6) moist mottles; weak fine subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine and fine roots; common very fine tubular pores; few fine gypsum crystals; few fine lime seams and masses; strongly effervescent; moderately alkaline (pH 8.2); clear wavy boundary.

C1--31 to 37 inches; light gray (10YR 6/1) silt loam, very dark gray (10YR 3/1) moist; many fine faint dark grayish brown (10YR 4/2) and few fine distinct yellowish red (5YR 4/6) moist mottles; weak medium subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine and few fine roots;

many very fine tubular pores; few fine lime seams and masses; strongly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary.

Ab1--37 to 43 inches; gray (10YR 5/1) silty clay loam, black (10YR 2/1) moist; few medium distinct yellowish red (5YR 4/6) moist mottles; moderate fine prismatic structure; hard, firm, very sticky and very plastic; common very fine roots; many very fine tubular pores; few fine lime seams and masses; slightly effervescent; mildly alkaline (pH 7.8); abrupt smooth boundary.

C2--43 to 61 inches; light brownish gray (2.5Y 6/2) silty clay loam, grayish brown (2.5Y 5/2) moist; common medium distinct light olive brown (2.5Y 5/4) and few fine distinct yellowish red (5YR 4/6) moist mottles; strong coarse prismatic structure; hard, firm, very sticky and very plastic; few very fine roots; common very fine tubular pores; few fine lime seams and masses; slightly effervescent; mildly alkaline (pH 7.8).

Type location: Elko County, Nevada; approximately 26 miles north of Wells; about 2,000 feet east and 2,500 feet north of the southwest corner of section 7, T.41 N., R.64 E.; (41 degrees, 27 minutes, 10 seconds north latitude and 114 degrees, 46 minutes, 27 seconds west longitude.)

Range in characteristics:

Soil moisture: Saturated at or near the surface for at least one month during most years, mainly during the late winter through early summer months.

Soil temperature: 47 to 50 degrees F.

Mollic epipedon thickness: 24 to 50 inches.

Control section:

Clay content--20 to 35 percent.

Reaction--Mildly alkaline or moderately alkaline, with some pedons strongly alkaline in the upper part.

Other features--Some pedons have a gravelly substratum below depths of 40 inches. Some pedons are drained due to stream channel entrenchment.

A horizons:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--1 or 2.

Other features--Buried A horizons occur in some pedons.

C horizon:

Hue--10YR, 2.5Y or 5Y.

Value--3 through 5 moist.

Chroma--1 or 2.

Texture--Stratified silt loam and silty clay loam. Some pedons have thin strata of silty clay or loam in the lower part.

Dewar Series

The Dewar series consists of well drained soils that formed in loess and mixed silty alluvium with a component of ash. Dewar soils are on fan piedmont remnants. Slopes are 2 to 8 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Loamy, mixed, mesic, shallow Xerollic Durargids

Typical pedon: Dewar gravelly silt loam in an area of map unit 260. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 25 percent pebbles.

A--0 to 3 inches; pale brown (10YR 6/3) gravelly silt loam, dark brown (10YR 3/3) moist; weak medium platy parting to subangular blocky structure; slightly hard, very friable, nonsticky and slightly plastic; common very fine roots; common very fine vesicular and few fine tubular pores; 20 percent pebbles; moderately alkaline (pH 8.2); clear smooth boundary.

Bt1--3 to 8 inches; pale brown (10YR 6/3) gravelly silt loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, sticky and slightly plastic; common very fine, few fine and medium roots; common very fine and fine tubular pores; few thin clay films lining pores; slightly effervescent; 15 percent pebbles; moderately alkaline (pH 8.4); clear smooth boundary.

Bt2--8 to 13 inches; very pale brown (10YR 7/3) gravelly silty clay loam, yellowish brown (10YR 5/4) moist; moderate medium subangular blocky structure; slightly hard, very friable, sticky and slightly plastic; common very fine, fine and medium roots; common very fine, fine and few medium tubular pores; common fine clay films lining pores and on faces of peds; 15 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Btqk--13 to 19 inches; very pale brown (10YR 8/3) gravelly silt loam, light yellowish brown (10YR 6/4) moist; massive; hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine and fine tubular pores; few thin clay films on faces of peds and lining pores; 15 percent pebbles; 20 percent weak durinodes; few fine filaments of lime; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

Bqkm--19 to 40 inches; white (10YR 8/2) indurated duripan, very pale brown (10YR 7/4) moist; massive; extremely hard and extremely firm; violently effervescent.

Type location: Elko County, Nevada; approximately 3 miles east of Moore Summit; located in an unsectionized area about 1,200 feet north and 2,300 feet west of the projected southwest corner of section 5, T.37 N., R.64 E.; (41 degrees, 06 minutes, 50 seconds north latitude and 114 degrees, 46 minutes, 05 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry early June through October.

Soil temperature: 47 to 52 degrees F.

Depth to indurated duripan: 14 to 20 inches.

Reaction: A and Bt horizons are neutral to moderately alkaline.

Control section:

Clay content--27 to 35 percent

Rock fragments--Averages 15 to 35 percent, dominantly pebbles

A horizon:

Value--3 or 4 moist.

Chroma--2 or 3.

Bt horizons:

Value--5 through 7 dry, 3 through 5 moist.

Chroma--2 through 4 dry, 3 or 4 moist.

Texture--Silty clay loam or clay loam. Thin subhorizons are silt loam.

Clay content--27 to 35 percent.

Rock fragments--15 to 35 percent, mainly pebbles.

Structure--Weak through strong, fine through coarse subangular blocky.

Consistence--Slightly hard or hard, dry; very friable or friable, moist, slightly sticky or sticky, wet.

Btqk horizon:

Clay content--25 to 30 percent.

Texture--Silty clay loam, clay loam or silt loam.

Rock fragments--15 to 35 percent. Subhorizons with up to 45 percent pebbles are in some pedons.

Durinodes--Weak or very weak, less than 30 percent.

Bqkm horizon:

Structure--Massive or moderately thick or very thick plate like layers.

Cementation--Some pedons are alternately strongly cemented or discontinuously indurated horizons below the duripan.

Donna Series

The Donna series consists of moderately deep over a duripan, well drained soils that formed in alluvium from mixed rock sources with a component of loess high in volcanic ash. Donna soils are on fan piedmont remnants. Slopes are 4 to 15 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Very-fine, montmorillonitic, frigid Abruptic Aridic Durixerolls

Typical pedon: Donna gravelly loam in an area of map unit 1770. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 30 percent pebbles.

A1--0 to 2 inches; grayish brown (10YR 5/2) gravelly loam, very dark brown (10YR 2/2) moist; weak thick platy structure parting to medium very thin platy; soft, very friable, slightly sticky and slightly plastic; common very fine, few fine and medium roots; common very fine and few fine interstitial and tubular pores; 15 percent pebbles; slightly acid (pH 6.4); clear smooth boundary.

A2--2 to 7 inches; grayish brown (10YR 5/2) gravelly loam, very dark brown (10YR 2/2) moist; moderate coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, few fine, medium and coarse roots; few very fine interstitial and tubular pores; 15 percent pebbles; neutral (pH 6.6); clear smooth boundary.

Bt1--7 to 19 inches; dark yellowish brown (10YR 4/4) clay, dark yellowish brown (10YR 4/4) moist; strong medium and coarse prismatic structure; very hard, very firm, sticky and plastic; few very fine, fine, medium and coarse roots; many thin clay films on faces of peds and lining pores, common pressure faces; common very fine tubular pores; 10 percent pebbles; neutral (pH 7.0); clear smooth boundary.

Bt2--19 to 33 inches; brownish yellow (10YR 6/6) clay, dark yellowish brown (10YR 4/6) moist; strong medium prismatic structure parting to moderate medium angular blocky; very hard, very firm, sticky and plastic; few very fine, fine and medium roots; many very fine and few fine interstitial and tubular pores; common moderately thick clay films on faces of peds and lining pores; 10 percent pebbles; neutral (pH 7.0); abrupt wavy boundary.

Bqkm--33 to 43 inches; light yellowish brown (10YR 6/4) indurated duripan with 1 to 2 millimeter laminar cap, dark brown (10YR 4/3) moist; strong medium and thick platy structure; extremely hard, extremely firm; few fine filaments of lime; clear wavy boundary.

2Bqk--43 to 60 inches; brownish yellow (10YR 6/6) very gravelly sandy loam, dark yellowish brown (10YR 4/6) moist; massive; hard, firm and brittle, nonsticky and nonplastic; many very fine interstitial pores; continuous brittle matrix; 25 percent pebbles, 5 percent cobbles, and 5 percent stones; few fine filaments of lime; mildly alkaline (pH 7.6).

Type location: Elko County, Nevada; about 3 miles south of Secret Pass; approximately 1,250 feet north and 2,000 feet east of the southwest corner of section 3, T.33 N., R.60 E.; (40 degrees, 45 minutes, 58 seconds north latitude and 115 degrees, 11 minutes, 24 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry; moist in winter and spring, dry mid June through October.

Soil temperature: 44 to 47 degrees F.

Mollic epipedon thickness: 7 to 12 inches.

Depth to duripan: 20 to 36 inches.

Thickness of duripan: 10 to 20 inches.

Control section:

Clay content--60 to 70 percent.

Rock fragments--0 to 15 percent, mainly pebbles.

Other features--There is an increase of 15 to 30 percent clay at the upper boundary of the Bt horizon.

A horizons:

Hue--10YR or 7.5YR.

Value--5 or 6 dry, 2 or 4 moist; 6 dry and 4 moist only in the surface 1 to 3 inches. After mixing the top 7 inches the soil meets the 5.5 dry and 3.5 moist color requirement for mollic.

Chroma--2 or 3.

Reaction--Slightly acid or neutral.

Bt horizon:

Hue--10YR or 7.5YR.

Value--4 through 6 dry, 4 or 5 moist.

Chroma--3 through 6.

Structure--Weak to strong medium or coarse prismatic, parting to angular blocky, massive in the lower part.

Consistence--Hard or very hard dry, firm or very firm moist, sticky or very sticky and plastic or very plastic wet.

Reaction--Slightly acid or neutral; some pedons are mildly alkaline immediately above the duripan.

Bqkm horizons:

Reaction--Neutral to mildly alkaline where the upper subhorizons lack carbonates; moderately alkaline to strongly alkaline in the calcareous portions.

2Bk and 2Bqk horizons:

Texture--Stratified, ranges sandy loam to sandy clay loam.

Rock fragments--Averages 35 to 65 percent, mainly pebbles.

Reaction--Mildly alkaline or moderately alkaline.

Duffer Series

The Duffer series consists of very deep, poorly drained soils that formed in mixed alluvium and lacustrine sediments. Duffer soils are on flood plains, fan skirts, and lake plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Fine-silty, carbonatic, mesic Aquic Calciorthids

Typical pedon: Duffer silt loam in an area of map unit 880. (Colors are for dry soil unless otherwise noted.)

A--0 to 4 inches; light gray (10YR 7/2) silt loam, grayish brown (10YR 5/2) moist; moderate medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine vesicular pores; strongly effervescent; strongly alkaline (pH 8.8); abrupt wavy boundary.

Bw--4 to 25 inches; light gray (10YR 7/2) silt loam, grayish brown (10YR 5/2) moist; massive; slightly hard, very friable, sticky and slightly plastic; common very fine roots; many very fine, few fine, medium, and coarse tubular pores; strongly effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary.

Bk1--25 to 50 inches; light gray (10YR 7/1) silty clay loam, gray (10YR 6/1) moist; massive; few very fine distinct light brown (7.5YR 6/4) iron mottles; slightly hard, friable, sticky and slightly plastic; many very fine and common fine, medium and coarse tubular pores; 25

percent lime nodules that are extremely hard and extremely firm; violently effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary.

Bk2--50 to 57 inches; gray (10YR 6/1) silty clay loam, gray (10YR 5/1) moist; massive; slightly hard, friable, sticky and slightly plastic; 25 percent lime nodules; violently effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary.

Bk3--57 to 60 inches; white (2.5Y 8/2) silty clay loam, light brownish gray (2.5Y 6/2) moist; many very fine distinct light brown (7.5YR 6/4) iron mottles; massive; slightly hard, friable, sticky and slightly plastic; 15 percent lime nodules; violently effervescent; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; approximately 1,800 feet north and 3,000 feet west of the southeast corner of section 4, T.28 N., R.62 E.; (40 degrees, 19 minutes, 53 seconds north latitude and 114 degrees, 59 minutes, 18 seconds west longitude.)

Range in characteristics:

Soil moisture: Saturated between depths of 18 and 40 inches in the early spring and are usually moist at this depth due to capillary moisture from ground water. Dry periods occur in the summer and fall.

Soil temperature: 47 to 52 degrees F.

Depth to the calcic horizon: 12 to 29 inches.

Reaction: Strongly alkaline or very strongly alkaline. Some pedons are moderately alkaline in some parts.

Redox concentration: Few distinct and prominent mottles in some pedons.

Control section:

Clay content--20 to 35 percent.

A horizon:

Hue--10YR through 5Y.

Value--5 through 7 dry, 3 through 5 moist.

Chroma--1 through 4.

Bw horizon:

Hue--10YR or 2.5Y.

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 through 4.

Structure--Weak or moderate, very fine to medium, granular, subangular blocky, or platy; in some pedons the lower part is massive.

Texture--Silt loam or silty clay loam.

Consistence--Slightly hard to hard, dry; very friable to firm, moist; slightly sticky to sticky, slightly plastic to plastic, wet.

Bk horizons:

Hue--10YR, 7.5YR, 2.5Y, 5Y.

Value--6 through 8 dry, 4 through 6 moist.

Chroma--1 through 4.

Texture--Silt loam or silty clay loam.

Structure--Subangular blocky or massive.

Redox concentration--Few to many distinct mottles.

Consistence--Slightly hard to hard, dry; very friable to firm, moist; slightly sticky to sticky, slightly plastic to plastic, wet.

Calcium carbonate equivalent--40 to 60 percent.

Eaglepass Series

The Eaglepass series consists of very shallow, well drained soils that formed in residuum and colluvium from limestone. Eaglepass soils are on mountains. Slopes are 8 to 30 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 49 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, mesic
Lithic Xeric Torriorthents

Typical pedon: Eaglepass very gravelly sandy loam located in an area of map unit 1600. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 30 percent pebbles and 10 percent cobbles.

A--0 to 1 inches; light gray (10YR 7/2) very gravelly sandy loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; few very fine roots; common very fine interstitial pores; common thin lime coats and pendants on undersides of pebbles; 40 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

C--1 to 5 inches; very pale brown (10YR 7/3) extremely gravelly sandy loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine, few medium, coarse, and very coarse roots; many very fine interstitial pores; common thin and few moderately thick lime coats and pendants on undersides of rock fragments; 65 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.

R--5 inches; limestone.

Type location: Elko County, Nevada; approximately 8 miles southwest of Ferber about 400 feet north and 1,400 feet east of the southwest corner of section 33, T.27 N., R.69 E.; (40 degrees, 09 minutes, 41 seconds north latitude and 114 degrees, 11 minutes, 45 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring months, dry in summer and fall except for 10 to 20 days cumulative between July to October due to convection storms.

Soil temperature: 50 to 53 degrees F.

Depth to bedrock: 4 to 6 inches.

Control section:

Clay content--8 to 18 percent.

Rock fragments--60 to 75 percent, includes pebbles, cobbles, and stones.

Reaction--Moderately alkaline or strongly alkaline.

Carbonates--Calcareous in all parts, violently effervescent. Less than 20 millimeter fraction contains more than 40 percent calcium carbonate equivalent.

A horizon:

Value--5 through 7 dry, 3 through 5 moist.

Chroma--2 through 4.

C horizon:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--3 or 4.

Texture--Loam, fine sandy loam or sandy loam.

Structure--Weak or moderate, fine or medium, subangular blocky.

Consistence--Nonsticky or slightly sticky wet.

Other features--Lime pendants and coatings are on rock fragments in some pedons.

Eastwell Series

The Eastwell series consists of shallow, well drained soils that formed in mixed alluvium influenced by loess. Eastwell soils are on fan piedmont remnants. Slopes are 2 to 30 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic, shallow Haploxerollic Durorthids

Typical pedon: Eastwell gravelly sandy loam located in an area of map unit 631. (Colors are for dry soils unless

otherwise noted.) The soil surface is covered with approximately 65 percent pebbles.

A1--0 to 1 inch; light gray (10YR 7/2) gravelly sandy loam, brown (10YR 5/3) moist; strong thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; 30 percent pebbles; slightly effervescent; moderately alkaline (pH 8.5); abrupt smooth boundary.

A2--1 to 5 inches; light gray (10YR 7/2) gravelly sandy loam, brown (10YR 5/3) moist; strong thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; 15 percent pebbles; slightly effervescent; moderately alkaline (pH 8.5); abrupt smooth boundary.

Bw--5 to 10 inches; very pale brown (10YR 7/3) very gravelly loam, yellowish brown (10YR 5/4) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, fine, common medium, and coarse roots; 40 percent pebbles; strongly effervescent; strongly alkaline (pH 8.5); clear smooth boundary.

Bqk--10 to 18 inches; white (10YR 8/2) very gravelly sandy loam, light yellowish brown (10YR 6/4) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, fine, medium and coarse roots; 20 percent durinodes 1/2 to 1 inch in diameter; 50 percent pebbles, 5 percent cobbles; 4 to 7 millimeter lime and silica pendants on the undersides of coarse fragments; strongly effervescent; strongly alkaline (pH 8.5); abrupt wavy boundary.

Bqkm--18 to 27 inches; white (10YR 8/2) strongly lime and silica cemented duripan, very pale brown (10YR 7/3) moist; massive; very hard, very firm and brittle; few very fine roots; 1 millimeter discontinuous laminar cap; strongly effervescent; abrupt wavy boundary.

Bqk2--27 to 60 inches; white (10YR 8/1) very gravelly loam, very pale brown (10YR 7/4) moist, massive; hard, friable, slightly sticky and slightly plastic; few very fine roots; 40 percent pebbles, 15 percent cobbles; 50 percent strong discontinuous lime and silica cementation; strongly effervescent; strongly alkaline (pH 8.5);

Type location: Elko County, Nevada; approximately 11 miles southeast of Currie; located in an unsectionized area about 1,300 feet east and 1,600 feet north of the projected southwest corner of section 31, T.27 N., R.66 E.; (40 degrees, 10 minutes, 04 seconds north latitude and 114 degrees, 34 minutes, 30 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist in winter and spring, dry June to October.

Soil temperature: 47 to 52 degrees F.

Depth to duripan: 10 to 20 inches.

Reaction: Moderately alkaline or strongly alkaline.

Control section:

Clay content--10 to 27 percent.

Rock fragments--35 to 50 percent, mainly pebbles.

Other features--Bqk horizons are above the duripan in some pedons.

A horizon:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 3.

Effervescence--Noneffervescent to slightly effervescent.

Bw horizon:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 through 4.

Structure--Weak or moderate prismatic or subangular blocky.

Texture--Sandy loam or loam.

Effervescence--Slightly effervescent to violently effervescent.

Bqkm horizon:

Value--5 or 6 moist.

Chroma--2 or 3.

Cementation--Continuously strongly silica cemented duripan, some pedons lack thin discontinuous silica lamellae.

Structure--Platy or massive.

Consistence--Very hard or extremely hard dry, very firm or extremely firm moist.

Effervescence--Strongly effervescent to violently effervescent.

Bqk horizons:

Value--6 through 8 dry, 4 through 7 moist.

Chroma--1 through 4.

Texture--Very gravelly loam or very cobbly loam.

Rock fragments--35 to 60 percent, mainly pebbles and cobbles.

Cementation--10 to 50 percent durinodes or weak to strong discontinuous lime and silica cementation.

Effervescence--Strongly effervescent or violently effervescent.

Segregated lime--Commonly has lime and silica coats on undersides of rock fragments.

Enko Series

The Enko series consists of very deep, well drained soils that formed in mixed loamy alluvium with a component of loess and ash. Enko soils are on fan skirts and inset fans. Slopes are 0 to 15 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Coarse-loamy, mixed, mesic Durixerollic Camborthids

Typical pedon: Enko silt loam in an area of map unit 1831. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 15 percent pebbles.

A--0 to 2 inches; light brownish gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist; weak thick platy structure parting to moderate very fine platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; few very fine interstitial pores; 10 percent pebbles; moderately alkaline (pH 8.2); clear smooth boundary.

Bw--2 to 14 inches; light brownish gray (10YR 6/2) loam, dark grayish brown (10YR 4/2) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine and few medium and coarse roots; common very fine, few fine and medium tubular pores; 10 percent pebbles; slightly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

Bqk1--14 to 32 inches; white (10YR 8/1) sandy loam, light brownish gray (10YR 6/2) moist; massive; hard, firm and brittle, nonsticky and slightly plastic; few very fine and fine roots; few very fine interstitial pores; 5 percent pebbles; continuous brittle matrix; few fine filaments of lime; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bqk2--32 to 60 inches; white (10YR 8/2) sandy loam, light brownish gray (10YR 6/2) moist; massive; slightly hard, very friable, nonsticky and slightly plastic; few very fine roots; few very fine interstitial pores; 30 percent discontinuous weak silica cementation; 5 percent pebbles; few fine filaments of lime; violently effervescent; moderately alkaline (pH 8.4).

Type location: Elko County, Nevada; about 1 mile northeast of Welcome; approximately 1,000 feet east and 100 feet south of the northwest corner of section 9, T.37 N., R.61 E.; (41 degrees, 06 minutes, 49 seconds north latitude and 115 degrees, 05 minutes, 45 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry; moist in winter and spring, dry June through October.

Soil temperature: 49 to 54 degrees F.

Thickness of A and Bw horizons: 12 to 30 inches.

Depth to continuous brittle matrix: 12 to 32 inches.

Depth to calcium carbonate: 10 to 30 inches.

Other features: Below 40 inches some pedons have gravelly or sandy substrata, or substrata containing gypsum crystals. Some pedons have noneffervescent Bq horizons above the Bqk horizon.

Control section:

Clay content--10 to 18 percent.

Rock fragments--0 to 15 percent pebbles.

A horizon:

Hue--10YR or 2.5Y.

Value--Commonly 6 or 7 dry, with 5 dry in some subhorizons of some pedons, 3 or 4 moist.

Chroma--2 or 3.

Reaction--Neutral to moderately alkaline.

Bw horizon:

Value--5 through 7 dry, 3 through 5 moist.

Chroma--2 through 4.

Texture--Loam, fine sandy loam, or sandy loam; some pedons have strata of silt loam or clay loam in the upper part where stratified.

Structure--Prismatic, angular blocky, subangular blocky or it is massive.

Consistence--Soft or slightly hard dry, very friable or friable, moist, nonsticky, slightly sticky or sticky, nonplastic, slightly plastic or plastic, wet.

Reaction--Neutral to moderately alkaline, increasing with depth.

Carbonates--Some pedons are calcareous in the lower portion of the horizon.

Bqk and Bq horizons:

Hue--10YR, 2.5Y, 5Y.

Value--6 through 8 dry, 4 through 7 moist.

Chroma--1 through 4 dry, 2 through 4 moist.

Texture--Loam, sandy loam, fine sandy loam, or very fine sandy loam.

Silica cementation--Continuous brittle matrix that is at least firm consistence when moist in horizons 10 to 40 inches thick. Subhorizons not continuously brittle and contain 20 to 50 percent durinodes or are 20 to 75 percent discontinuous weakly silica-cemented.

Structure--Platy or is massive.

Consistence--Soft to hard, dry; very friable to firm, moist; nonsticky or slightly sticky and nonplastic or slightly plastic or brittle when wet. Substrata that are very friable, moist are in some pedons.

Reaction--Mildly alkaline to very strongly alkaline commonly increasing with depth.

Equis Series

The Equis series consists of very deep, poorly drained soils that formed in lacustrine sediments and mixed alluvium. Equis soils are on alluvial flats and lake plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Fine, carbonatic, mesic Typic Halaquepts

Typical pedon: Equis silty clay, located in an area of map unit 763. (Colors are for dry soil unless otherwise noted.)

A1--0 to 1 inches; light brownish gray (10YR 6/2) silty clay, dark grayish brown (10YR 4/2) moist; strong thick platy structure; slightly hard, very friable, sticky and plastic; many very fine, common fine and medium roots; many very fine vesicular pores; violently effervescent; very strongly alkaline (pH 9.6); abrupt smooth boundary.

A2--1 to 2 inches; light brownish gray (10YR 6/2) silty clay, dark grayish brown (10YR 4/2) moist; weak thin platy structure parting to weak fine granular; soft, very friable, sticky and plastic; many very fine, common fine and medium roots; many very fine interstitial pores; violently effervescent; very strongly alkaline (pH 9.6); abrupt smooth boundary.

A3--2 to 6 inches; light brownish gray (10YR 6/2) silty clay loam, dark grayish brown (10YR 4/2) moist; moderate coarse subangular blocky structure parting to moderate medium subangular blocky; hard, friable, sticky and plastic; many very fine, common fine and medium roots; many very fine tubular pores; violently effervescent; very strongly alkaline (pH 9.4); abrupt smooth boundary.

Bg1--6 to 17 inches; light brownish gray (10YR 6/2) silty clay, dark grayish brown (10YR 4/2) moist; moderate coarse prismatic structure parting to moderate medium angular blocky; hard, friable, sticky and very plastic; many very fine, common fine and medium roots; many very fine tubular pores; violently effervescent; very strongly alkaline (pH 9.4); clear smooth boundary.

Bg2--17 to 24 inches; light brownish gray (10YR 6/2) silty clay, grayish brown (10YR 5/2) moist; moderate very coarse prismatic structure; hard, firm, sticky and very plastic; common very fine, few fine and medium roots; many very fine tubular pores; few fine prominent dark brown (7.5YR 4/4) mottles; common pressure faces on faces of peds; violently effervescent; strongly alkaline (pH 9.0); clear smooth boundary.

Bkg1--24 to 34 inches; white (10YR 8/1) silty clay loam, light gray (10YR 7/2) moist; massive; hard, friable, very sticky and plastic; common very fine and few fine roots; many very fine and fine tubular pores; few soft masses of lime; few fine prominent dark brown (7.5YR 4/4) mottles in pores; violently effervescent; very strongly alkaline (pH 9.2); clear smooth boundary.

Bkg2--34 to 41 inches; white (10YR 8/1) silty clay loam, light gray (10YR 7/2) moist; massive; hard, friable, very sticky and plastic; common very fine roots; many very fine and fine tubular pores; few fine prominent dark brown (7.5YR 4/4) mottles; few fine soft masses of lime; violently effervescent; strongly alkaline (pH 8.8); gradual wavy boundary.

Cg--41 to 60 inches; white (10YR 8/1) silty clay loam, light gray (10YR 7/2) moist; massive; hard, friable, very sticky and plastic; few very fine roots; many very fine and fine tubular pores; common fine prominent yellowish brown (10YR 5/6) mottles; violently effervescent; strongly alkaline (pH 8.8).

Type location: Elko County, Nevada; approximately 1 1/2 miles northeast of Warm Springs Ranch; 1,100 feet south and 1,300 feet west of the northeast corner of section 28, T.36 N., R.64 E.; (40 degrees, 58 minutes, 40 seconds north latitude and 114 degrees, 44 minutes, 21 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist at or near the surface. Saturated at a depth of 5 to 20 inches in most years. Depth to the water table ranges from about 1 foot in the spring to 5 feet in late summer.

Soil temperature: 48 to 52 degrees F.

Reaction: Strongly alkaline or very strongly alkaline.

SAR: 20 to 70 percent in the upper 20 inches, decreasing to less than 5 percent below 20 inches.

Calcium carbonate equivalent: 45 to 65 percent. Clay sized carbonates range from 30 to 45 percent in the upper 30 inches.

A horizons:

Hue--10YR through 5Y or N.

Value--6 through 8 dry, 4 through 7 moist.

Chroma--0 through 2

Effervescence--Strongly effervescent or violently effervescent.

Bg horizons:

Hue--10YR through 5Y or N.

Value--6 through 8 dry, 4 through 7 moist.

Chroma--0 through 2

Clay content--40 to 50 percent silicate clay, 30 to 45 percent carbonates of clay size.

Texture--Silty clay or clay

Structure--Prismatic or angular blocky.

Consistence--Hard to very hard, very friable to firm.

Reaction--Strongly alkaline or very strongly alkaline.

Bkg horizon:

Hue--5Y through 10YR or N.

Value--6 through 8 dry, 5 through 7 moist.

Chroma--0 through 3

Structure--Angular blocky or massive.

Texture--Silty clay or silty clay loam.

Clay content--30 to 45 percent silicate clay, 18 to 30 percent carbonates of clay size.

Consistence--Hard or very hard, friable to very firm, sticky or very sticky, plastic to very plastic.

Other features--Some pedons have prominent mottles.

Cg horizon:

Texture--Silt loam, silty clay loam or silty clay.

Consistence--Hard to very hard, friable to very firm, moist.

Other features--Some pedons lack snail shell fragments.

Gance Series

The Gance series consists of very deep, well drained soils that formed in mixed alluvium with a component of loess and volcanic ash. Gance soils are on fan piedmont remnants. Slopes are 2 to 8 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, mesic Durixerollic Haplargids

Typical pedon: Gance very gravelly loam, 15 to 30 percent slopes, is located in Elko County, Nevada, Northwest Part. (Colors are for dry soils unless otherwise noted.) The soil surface is partially covered with 40 percent pebbles.

A--0 to 5 inches; pale brown (10YR 6/3) very gravelly loam, dark brown (10YR 3/3) moist; strong fine granular structure; slightly hard, friable, sticky and plastic; many very fine, fine, and common medium and coarse roots; many very fine interstitial pores; 35 percent pebbles; neutral (pH 7.0); clear wavy boundary.

Bt--5 to 13 inches; yellowish brown (10YR 5/4) very gravelly clay, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, friable, very sticky and very plastic; many very fine and fine, and common medium and coarse roots; many very fine tubular pores; 40 percent pebbles; many moderately thick clay films on faces of peds and mineral grains and lining pores; mildly alkaline (pH 7.4); clear wavy boundary.

Btk--13 to 20 inches; light yellowish brown (10YR 6/4) very gravelly clay, yellowish brown (10YR 5/4) moist; moderate medium subangular blocky structure; hard, friable, very sticky and very plastic; common very fine, and few fine and medium roots; many very fine tubular pores; 1 millimeter thick lime and silica coats on the undersides of pebbles; 45 percent pebbles and 10 percent cobbles; few thin clay films on mineral grains and lining pores; slightly effervescent; moderately alkaline (pH 8.2); clear wavy boundary.

Bk--20 to 30 inches; light yellowish brown (10YR 6/4) very gravelly sandy loam, yellowish brown (10YR 5/4) moist; massive; hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; many very fine and fine interstitial, and common very fine tubular pores; 1 millimeter thick lime and silica coats on pebbles and cobbles; 45 percent pebbles, 5 percent cobbles, and 5 percent stones; strongly effervescent; moderately alkaline (pH 8.2); clear wavy boundary.

Bqk--30 to 60 inches; very pale brown (10YR 7/4) extremely gravelly loam, light yellowish brown (10YR 6/4) moist; massive; hard, firm, and brittle, sticky and plastic; few very fine and fine roots; many very fine and fine interstitial and common very fine tubular pores; continuous brittle matrix; 1 millimeter thick lime and silica coats on pebbles, cobbles and stones; few large rounded soft lime masses, and few irregular lime filaments; 45 percent pebbles, 10 percent cobbles, and 5 percent stones; strongly effervescent; moderately alkaline (pH 8.2).

Type location: Elko County, Nevada; about 28 miles north of Wells, approximately 500 feet west and 750 feet south of the northeast corner of section 36, T.42 N., R.62 E.; (41 degrees, 29 minutes, 20 seconds north latitude and 114 degrees, 53 minutes, 51 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in some part late October through early June.

Soil temperature: 47 to 52 degrees F.

Depth to base of Bt horizon: 20 to 32 inches.

Depth to carbonates: 13 to 32 inches.

Depth to continuously brittle Bqk horizon: 25 to 38 inches.

Control section:

Clay content--Averages 35 to 55 percent.

Rock fragments--35 to 75 percent.

Other features--Some pedons have noncemented horizons below the Bqk horizon. Some pedons have buried Bt horizons below 56 inches.

A horizon:

Value--5 or 6 dry, 3 through 5 moist.

Chroma--2 or 3.

Reaction--Neutral to moderately alkaline.

Bt horizon:

Value--5 or 6 dry, 3 through 5 moist.

Chroma--2 through 4.

Texture--Clay or clay loam.

Clay content--35 to 45 percent.

Rock fragments--20 to 55 percent mainly pebbles, with up to 10 percent cobbles.

Structure--Very fine to medium subangular blocky.

Lower Bt horizons:

Value--4 through 6 dry, 3 through 5 moist.

Chroma--3 or 4.

Texture--Clay or sandy clay.

Clay content--40 to 55 percent.

Rock fragments--35 to 75 percent mainly pebbles, with up to 20 percent cobbles.

Structure--Fine or medium subangular or angular blocky or fine to coarse prismatic.

Reaction--Mildly alkaline or moderately alkaline, usually increasing with depth.

Other features--Some pedons have a Bk horizon between the Btk and the Bqk horizons.

Bqk horizon:

Value--6 through 8 dry, 5 through 7 moist.

Chroma--2 through 4.

Texture--Sandy loam, loam, and coarse sandy loam.

Rock fragments--35 to 80 percent, of which up to 40 percent is cobbles.

Cementation--Continuous brittle matrix that is hard and firm.

Reaction--Moderately alkaline or strongly alkaline.
 Effervescence--Strongly effervescent to violently effervescent.

Gollaher Series

The Gollaher series consists of very shallow, well drained soils that formed in residuum and colluvium from limestone and dolomite. Gollaher soils are on mountains. Slopes are 15 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, frigid Lithic Xerorthents

Typical pedon: Gollaher extremely gravelly loam in an area of map unit 140. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 60 percent pebbles and 5 percent cobbles.

A1--0 to 5 inches; pale brown (10YR 6/3) extremely gravelly loam, dark grayish brown (10YR 4/2) moist; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine and few medium roots; many very fine interstitial and common very fine tubular pores; 65 percent pebbles; 1 to 2 millimeter lime coats and pendants on undersides of pebbles; strongly effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

Bk--5 to 10 inches; pale brown (10YR 6/3) extremely gravelly loam, dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, few fine and medium roots; many very fine interstitial and common very fine tubular pores; 70 percent pebbles; 2 to 3 millimeter lime coats and pendants on undersides of pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.

R--10 inches; limestone bedrock.

Type location: Elko County, Nevada; about 3 miles north of Pequop Summit; approximately 1,200 feet south and 2,000 feet west of the northeast corner of section 1, T.37 N., R.65 E.; (41 degrees, 07 minutes, 20 seconds north latitude and 114 degrees, 34 minutes, 15 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist in the winter and spring, dry from July through October. Moist in all parts for 45 or more days in the 4 months following the winter solstice.

Soil temperature: 43 to 47 degrees F.

Control section:

Clay content--15 to 27 percent.

Depth to bedrock--4 to 10 inches.

Rock fragments--45 to 75 percent, mainly pebbles with up to 5 percent cobbles.

Calcium carbonate equivalent--40 to 60 percent.

A horizon:

Value--5 or 6 dry, 3 or 4 moist.

Chroma--2 or 3.

Reaction--Mildly alkaline or moderately alkaline.

Effervescence--Strongly effervescent to violently effervescent.

Other features--Common to continuous thin or medium lime pendants on undersides of rock fragments.

Bk horizon:

Value--3 or 4 moist.

Chroma--2 or 3.

Texture--Loam.

Reaction--Mildly alkaline or moderately alkaline.

Other features--Common to continuous thin to thick lime pendants on undersides of rock fragments.

Graley Series

The Graley series consists of shallow, well drained soils that formed in residuum and colluvium from andesite. Graley soils are on mountains. Slopes are 8 to 50 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Lithic Argixerolls

Typical pedon: Graley stony loam located in an area of map unit 680. (Colors are for dry soils unless otherwise noted.) The soil surface is partially covered with approximately 30 percent pebbles and 3 percent stones.

A1--0 to 3 inches; grayish brown (10YR 5/2) stony loam, very dark brown (10YR 2/2) moist; moderate thick platy structure parting to moderate medium subangular blocky; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and common fine roots;

common very fine and fine tubular and common very fine interstitial pores; 25 percent pebbles, 5 percent cobbles, and 2 percent stones; neutral (pH 7.0); abrupt smooth boundary.

A2--3 to 7 inches; grayish brown (10YR 5/2) loam, very dark brown (10YR 2/2) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine, few medium and coarse roots; common very fine and few fine tubular pores; 30 percent pebbles and 2 percent stones; mildly alkaline (pH 7.4); clear smooth boundary.

Bt1--7 to 11 inches; light brownish gray (10YR 6/2) very gravelly clay, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; hard, friable, sticky and plastic; few very fine, fine, medium and coarse roots; few very fine vesicular and tubular pores; few thin clay films coating mineral grains and lining pores; 40 percent pebbles; 15 percent cobbles; neutral (pH 7.2); clear smooth boundary.

Bt2--11 to 19 inches; light brown (7.5YR 6/4) very gravelly clay, dark brown (7.5YR 3/4) moist; moderate fine and medium angular blocky structure; hard, friable, very sticky and very plastic; few very fine, fine and medium roots; many thin clay films lining tubular pores and many moderately thick clay bridges between mineral grains; 35 percent pebbles and 15 percent cobbles; neutral (pH 7.2); abrupt irregular boundary.

R--19 inches; Rhyolite.

Type location: Elko County, Nevada; approximately 10 miles north of Silver Zone Pass in the Toano Range; located in an unsectionized area 1,000 feet north and 300 feet west of the projected southeast corner of section 7, T.36 N., R.68 E.; (41 degrees, 00 minutes, 45 seconds north latitude and 114 degrees, 18 minutes, 52 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually moist; moist in winter and spring, dry Mid-July through late October.

Soil temperature: 42 to 47 degrees F.

Mollic epipedon thickness: 7 to 12 inches, does not include the argillic horizon.

Depth to bedrock: 14 to 20 inches.

Reaction: Neutral or mildly alkaline.

Control section:

Clay content--35 to 50 percent.

Rock fragments--35 to 60 percent, mainly pebbles.

A horizons:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--2 or 3.

Consistence--Nonplastic to plastic wet.

Bt horizon:

Hue--7.5YR or 10YR.

Value--5 or 6 dry, 3 or 4 moist.

Chroma--2 to 4.

Texture--Clay loam or gravelly clay.

Structure--Angular or subangular blocky.

Consistence--Very hard or hard, dry; friable to firm moist, sticky or very sticky moist; plastic or very plastic wet.

Gravier Series

The Gravier series consists of very deep, well drained soils that formed in mixed alluvium mainly from limestone and tuffs. Gravier soils are on beach plains. Slopes are 0 to 15 percent. The mean annual precipitation is about 6 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Typic Calciorthids

Typical pedon: Gravier gravelly loam is located in an area of map unit 113. The soil surface is partially covered by approximately 35 percent pebbles. (Colors are for dry soils unless otherwise noted.)

A--0 to 3 inches; light brownish gray (2.5Y 6/2) gravelly loam, olive brown (2.5Y 4/4) moist; moderate very thick platy structure parting to medium platy; soft, very friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine interstitial pores and few very fine tubular; common thin to moderately thick lime coats on the undersides of pebbles; many 1 millimeter lime pendants; 25 percent pebbles; violently effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary.

Bk1--3 to 12 inches; light gray (10YR 7/2) very gravelly loam, light yellowish brown (10YR 6/4) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; few medium, common very fine and fine roots; few fine tubular pores and common very fine interstitial; many thin lime coats on sides, many moderate to thick lime coats on the undersides of pebbles; many lime pendants; 35 percent pebbles; violently effervescent; moderately alkaline (pH 8.0); clear smooth boundary.

Bk2--12 to 17 inches; light gray (2.5Y 7/2) very gravelly coarse sandy loam, light olive brown (2.5Y 5/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine and fine

roots; few very fine and fine interstitial pores; many thin lime coats on sides, many moderate to thick lime coats on the undersides of pebbles; many lime pendants; 55 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary.

Bk3--17 to 24 inches; pale yellow (2.5Y 7/4) extremely gravelly coarse sandy loam, light olive brown (2.5Y 5/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine and fine roots; few very fine and fine tubular and interstitial pores; many thin lime coats on sides, many moderate to thick lime coats on the undersides of pebbles; many lime pendants; 75 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

2Bk4--24 to 35 inches; light gray (2.5Y 7/2) gravelly sandy loam, light olive brown (2.5Y 5/4) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine and fine roots; few very fine and fine interstitial pores; common thin to moderately thick lime coats on undersides of pebbles; 35 percent pebbles; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary.

Bk5--35 to 44 inches; white (10YR 8/2) extremely gravelly very fine sandy loam, pale brown (10YR 6/3) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine and fine roots; few very fine and fine tubular and interstitial pores; common thin to moderately thick lime coats on the undersides of pebbles; many 1 millimeter lime pendants; 75 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); gradual wavy boundary.

C--44 to 61 inches; very pale brown (10YR 7/3) extremely gravelly loamy sand, yellowish brown (10YR 5/4) moist; single grain; loose, nonsticky and nonplastic; few very fine roots; few very fine and fine tubular pores; many thin lime coats surrounding pebbles; 80 percent pebbles; violently effervescent; moderately alkaline (pH 8.2).

Type location: Elko County, Nevada; approximately 2 1/2 miles east of the Pilot Mountain Ranch in Pilot Creek Valley; 1,000 feet north and 1,200 feet west of the southeast corner of section 31, T.37 N., R.69 E.; (41 degrees, 02 minutes, 25 seconds north latitude and 114 degrees, 12 minutes, 12 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry; moist for short periods in winter and spring, dry late May through November. Typic Aridic moisture regime.

Soil temperature: 53 to 59 degrees F.

Depth to the calcic horizon: 3 to 5 inches.

Control section:

Clay content--Averages 8 to 18 percent.

Rock fragments--35 to 60 percent mainly pebbles, with up to 10 percent cobbles.

Reaction--Moderately alkaline to strongly alkaline.

Calcium carbonate equivalent--15 to 30 percent in the calcic horizon.

A horizon:

Hue--10YR or 2.5Y.

Value--6 or 7 dry, 4 through 6 moist.

Chroma--2 through 4.

Bk horizons:

Hue--10YR or 2.5Y.

Value--7 or 8 dry, 4 or 6 moist.

Chroma--2 through 4.

Structure--Weak, fine or medium subangular blocky, single grain or is massive.

Texture--Stratified loam through coarse sandy loam.

Consistence--Loose, soft or slightly hard dry, nonsticky or slightly sticky and nonplastic or slightly plastic wet.

Other features--Thin to thick lime coats and pendants coating rock fragments or on undersides. Thin strata of loamy sand to loamy fine sand common in pedons.

C horizons:

Hue--10YR or 2.5YR.

Value--6 through 8 dry, 4 through 6 moist.

Chroma--2 through 4.

Halacan Series

The Halacan series consists of shallow, well drained soils that formed in residuum and colluvium from limestone. Halacan soils are on mountains. Slopes are 8 to 30 percent. The mean annual precipitation is about 16 inches and the mean annual temperature is about 38 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic Cryic Lithic Rendolls

Typical pedon: Halacan very gravelly loam located in an area of map unit 1181. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 40 percent pebbles and 10 percent cobbles.

A1--0 to 2 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; weak thin platy structure; soft, very friable, nonsticky and

nonplastic; many very fine and fine roots; many very fine vesicular and interstitial pores; few thin lime coats on undersides of rock fragments; 40 percent pebbles and 5 percent cobbles; violently effervescent; moderately alkaline (pH 7.9); abrupt wavy boundary.

A2--2 to 5 inches; grayish brown (10YR 5/2) very gravelly loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, friable, nonsticky and nonplastic; many very fine, few fine and medium roots; many fine interstitial pores; thick lime coats on undersides of pebbles; 50 percent pebbles; violently effervescent; moderately alkaline (pH 7.9); clear wavy boundary.

Bk--5 to 12 inches; brown (10YR 5/3) extremely channery loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and few fine roots; common fine interstitial and many very fine tubular pores; few thick lime coats on undersides of channers; 70 percent channers; violently effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary.

R--12 inches; fractured limestone.

Type location: Elko County, Nevada; approximately 16 miles southwest of Wendover in the Goshute Mountains; 1,350 feet north and 200 feet west of the southeast corner of section 29, T.32 N., R.68 E.; (40 degrees, 36 minutes, 52 seconds north latitude and 114 degrees, 18 minutes, 12 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually moist, moist mid fall through mid summer. Dry in late summer and early fall.

Soil temperature: 37 to 42 degrees F.

Summer soil temperature: 50 to 59 degrees F.

Depth to bedrock: 10 to 20 inches.

Thickness of mollic epipedon: 7 to 12 inches.

Calcium carbonate equivalent: 40 to 60 percent.

Control section:

Clay content--10 to 18 percent.

Rock fragments--50 to 80 percent, mainly channers.

A horizon:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--2 or 3.

Bk horizon:

Value--5 through 7 dry, 3 through 5 moist.

Chroma--2 through 6.

Carbonates--0 to 4 percent visible secondary carbonates.

Reaction--Moderately alkaline to strongly alkaline.

Consistence--Very friable to friable moist.

Halleck Series

The Halleck series consists of very deep, poorly drained soils that formed in mixed silty alluvium influenced by loess and volcanic ash. Halleck soils are on flood plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Fine-silty, mixed (calcareous), frigid Cumulic Endoaquolls

Typical pedon: Halleck silt loam in an area of map unit 1820. (Colors are for dry soil unless otherwise noted.)

Ap--0 to 5 inches; dark gray (10YR 4/1) silt loam, black (10YR 2/1) moist; moderate medium angular blocky structure parting to thick platy structure; hard, friable, slightly sticky and plastic; many very fine, fine and medium roots; few very fine and fine tubular and interstitial pores; strongly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

A1--5 to 14 inches; dark gray (10YR 4/1) silt loam, black (10YR 2/1) moist; moderate very coarse subangular blocky structure; hard, friable, slightly sticky and plastic; common very fine, fine and medium roots; few very fine and fine interstitial and tubular pores; slightly effervescent; moderately alkaline (pH 8.0); gradual smooth boundary.

A2--14 to 18 inches; gray (10YR 5/1) silty clay loam, black (10YR 2/1) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and plastic; common very fine, fine and medium roots; few very fine and fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0); gradual smooth boundary.

A3--18 to 34 inches; gray (10YR 5/1) silty clay loam, black (10YR 2/1) moist; common fine distinct yellowish brown (10YR 5/6) iron mottles; weak medium subangular blocky structure; hard, friable, slightly sticky and plastic; few very fine, fine and medium roots; common very fine and few fine interstitial and tubular pores; slightly effervescent; moderately alkaline (pH 8.0); gradual smooth boundary.

Cg1--34 to 41 inches; gray (5Y 6/1) silty clay loam, dark gray (5Y 4/1) moist; weak medium subangular blocky structure; hard, friable, slightly sticky and plastic; few very fine, fine and medium roots; few very fine tubular pores; 10 percent pebbles; slightly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

2Cg2--41 to 60 inches; gray (5Y 6/1) very gravelly coarse sandy loam, gray (5Y 5/1) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine, fine and

medium roots; 40 percent pebbles; slightly effervescent; moderately alkaline (pH 8.2).

Type location: Elko County, Nevada; about 1 mile northwest of Welcome; approximately 500 feet east and 100 feet south of the northwest corner of section 8, T.37 N., R.61 E.; (41 degrees, 06 minutes, 50 seconds north latitude and 115 degrees, 07 minutes, 00 seconds west longitude.)

Range in characteristics:

Soil moisture: Saturated at or near the surface for at least one month during most years, mainly during the late winter through early summer months.

Soil temperature: 43 to 47 degrees F.

Mollic epipedon thickness: 31 to 60 inches.

Control section:

Clay content--20 to 35 percent.

Reaction--Mildly alkaline or moderately alkaline.

Effervescence--Slightly effervescent to violently effervescent.

Sand fraction--Less than 15 percent fine sand and coarser.

A horizons:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--1 or 2 dry and moist.

Other features--Thin strata of clay loam or loam are present in the lower subhorizons of some pedons.

Buried A1 horizons are in many pedons.

C horizon:

Hue--5GY, 5Y, 2.5Y, 10YR.

Value--5 through 7 dry.

Chroma--1 or 2.

Texture--Average loam to silty clay loam, but are dominantly clay loam or silty clay loam with less than 15 percent by weight of fine sand or coarser particles.

Other features--Gravelly substratums or drained phases are recognized.

Hapgood Series

The Hapgood series consists of deep and very deep, well drained soils that formed in residuum and colluvium from mixed rocks. Hapgood soils are on mountain side slopes. Slopes are 50 to 75 percent. The mean annual precipitation is about 16 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, mixed Pachic Cryoborolls

Typical pedon: Hapgood very gravelly loam, located in Elko County, Nevada, Central Part. (Colors are for dry soils unless otherwise noted).

A1--0 to 8 inches; dark grayish brown (10YR 4/2) very gravelly loam, very dark brown (10YR 2/2) moist; weak fine granular structure; soft, very friable, slightly sticky and nonplastic; many very fine and few fine roots; common very fine interstitial pores; 35 percent pebbles; slightly acid (pH 6.5); clear smooth boundary.

A2--8 to 20 inches; grayish brown (10YR 5/2) very gravelly loam, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine and medium roots; common very fine tubular and few fine interstitial pores; 40 percent pebbles; slightly acid (pH 6.5); gradual wavy boundary.

AC--20 to 31 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; common very fine interstitial and tubular pores; 40 percent pebbles and 5 percent cobbles; slightly acid (pH 6.3); clear wavy boundary.

C--31 to 42 inches; pale brown (10YR 6/3) very gravelly sandy loam, brown (10YR 4/3) moist; massive; slightly hard, very friable, slightly sticky and nonplastic; few very fine roots; few fine tubular pores; 40 percent pebbles and 10 percent cobbles; slightly acid (pH 6.3); abrupt wavy boundary.

R--42 inches; hard argillitic siltstone.

Type location: Elko County, Nevada; approximately 17 miles southwest of Northfork, about 1,200 feet south and 1,700 feet east of the northwest corner of section 14, T.39 N., R.53 E.; (41 degrees, 16 minutes, 27 seconds north latitude and 115 degrees, 58 minutes, 40 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist in winter and spring, dry late July through early October.

Soil temperature: 38 to 47 degrees F.

Summer soil temperature: 55 to 59 degrees F.

Mollic epipedon thickness: 16 to 60 inches.

Depth to bedrock: 40 to more than 80 inches.

Control section:

Clay content--18 to 27 percent.

Rock fragments--35 to 50 percent, dominantly pebbles.
Reaction--Slightly acid or neutral.

A horizons:

Hue--10YR or 7.5YR

Value--2 through 5 dry, 2 or 3 moist.

Chroma--1 through 3 in most pedons, chroma of 1 is common only in A1 horizon and chroma of 3 is common only in A3 horizon or below.

Base saturation--50 to 75 percent in upper part.

C horizon:

Hue--10YR or 7.5YR.

Value--4 through 7 dry, 3 through 5 moist.

Chroma--2 through 6.

Texture--Predominantly loam, but some pedons contain strata of fine sandy loam, sandy loam, silt loam or clay loam.

Hardhat Series

The Hardhat series consists of very deep, well drained soils that formed in mixed alluvium over lacustrine sediments. Hardhat soils are on lake plain terraces and fan skirts. Slopes are 2 to 8 percent. The mean annual precipitation is about 6 inches and the mean annual temperature is about 49 degrees F.

Taxonomic class: Coarse-loamy, mixed (calcareous), mesic Durorthic Torriorthents

Typical pedon: Hardhat silt loam is located in an area of map unit 210. (Colors are for dry soils unless otherwise noted.) The soil surface is partially covered with approximately 15 percent pebbles.

A1--0 to 3 inches; light gray (2.5Y 7/2) silt loam, olive brown (2.5Y 4/4) moist; weak thin platy structure; soft, very friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine and fine tubular pores; thin lime coats on undersides of coarse fragments; 10 percent pebbles; strongly effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary.

A2--3 to 9 inches; light gray (2.5Y 7/2) silt loam, light olive brown (2.5Y 5/4) moist; weak medium prismatic structure; soft, very friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine and fine tubular and interstitial pores; thin lime coats on undersides of coarse fragments; 10 percent pebbles;

strongly effervescent; strongly alkaline (pH 8.8); clear smooth boundary.

Bqk--9 to 19 inches; pale yellow (2.5Y 7/4) silt loam, light olive brown (2.5Y 5/4) moist; moderate thin platy structure; hard, friable, sticky and slightly plastic; common very fine and fine roots; few very fine tubular and interstitial pores; thin lime and silica coats bridging mineral grains; 10 percent pebbles; strongly effervescent; strongly alkaline (pH 8.8); abrupt smooth boundary.

2Bqky1--19 to 26 inches; light gray (10YR 7/2) gravelly sandy loam, brown (10YR 5/3) moist; massive; hard, firm and brittle, slightly sticky and nonplastic; few very fine and fine roots; few very fine tubular pores; continuous brittle matrix; thin to moderately thick lime coats on the undersides of coarse fragments; few fine gypsum filaments; 15 percent pebbles; violently effervescent; strongly alkaline (pH 9.0); abrupt smooth boundary.

2Bqky2--26 to 40 inches; light gray (10YR 7/2) very gravelly sandy loam, brown (10YR 5/3) moist; massive; hard, firm and brittle, nonsticky and nonplastic; few very fine and fine roots; common very fine interstitial pores; continuous brittle matrix; few fine irregularly shaped soft lime masses; many thin lime coats on tops and thin to moderately thick lime coats on the sides and undersides of coarse fragments; 35 percent pebbles; few fine gypsum filaments; strongly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

C1--40 to 57 inches; white (10YR 8/2) very gravelly fine sandy loam, pale brown (10YR 6/3) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; few fine and medium roots; few very fine tubular and interstitial pores; thin to moderately thick lime coats on the undersides of coarse fragments; 45 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); clear wavy boundary.

C2--57 to 60 inches; white (10YR 8/2) very gravelly sandy loam, pale brown (10YR 6/3) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; few very fine tubular and interstitial pores; many thin lime coats on tops and thin to moderately thick lime coats on the sides and undersides of coarse fragments; 55 percent pebbles; violently effervescent; moderately alkaline (pH 8.2).

Type location: Elko County, Nevada; approximately 12 miles south of Montello, Nevada in Pilot Creek Valley; about 1,275 feet east and 275 feet north of the southwest corner of section 3, T.37 N., R.69 E., (41 degrees, 06 minutes, 38 seconds north latitude and 114 degrees, 09 minutes, 16 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist for short periods in the winter and spring, dry late May through early November.

Soil temperature: 53 to 57 degrees F.

Depth to lacustrine material: 15 to 25 inches.

Depth to continuous weak brittle matrix: 10 to 20 inches.

Depth to segregated lime and silica bridging mineral grains: 4 to 10 inches.

Depth to gypsum: 12 to 25 inches.

Reaction: Moderately alkaline or strongly alkaline.

Calcium carbonate equivalent: Averages 10 to 20 percent.

Other features: C horizons are below 35 inches in some pedons.

Control section:

Clay content--8 to 18 percent.

Rock fragments--Average 5 to 20 percent, mainly pebbles.

A horizons:

Hue--10YR or 2.5Y.

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 4.

Bqk horizons:

Hue--10YR or 2.5Y.

Value--6 or 7 dry, 4 or 5 moist.

Chroma--3 or 4.

Texture--Silt loam, very fine sandy loam, sandy loam, or fine sandy loam in the upper subhorizons and stratified very fine sandy loam to gravelly sand in the lower subhorizons.

Structure--Weak prismatic, weak to strong platy or it is massive.

Consistence--Hard or very hard.

Silica-lime cementation--The upper part has few to many silica bridges or coats, but the matrix is friable or very friable. Some subhorizons are continuously brittle and have very firm or firm consistence.

Bqky horizons:

Hue--10YR, 2.5Y or 5Y.

Value--6 through 8 dry, 4 through 7 moist.

Chroma--2 through 4.

Texture--Stratified very fine sandy loam to very gravelly sandy loam.

Rock fragments--Pebbles are lacking in some pedons.

Structure--Platy or it is massive.

Consistence--Soft to hard, very friable to firm, nonsticky or slightly sticky, nonplastic or slightly plastic.

Gypsum crystals--Few or common. Relict mottles or black coats are common in any subhorizon.

Hardol Series

The Hardol series consists of very deep, well drained soils that formed in residuum and colluvium from limestone.

Hardol soils are on mountains. Slopes are 15 to 75 percent. The mean annual precipitation is about 30 inches and the mean annual temperature is about 40 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic Calcic Pachic Cryoborolls

Typical pedon: Hardol very gravelly silt loam located in an area of map unit 1201. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 20 percent pebbles and 10 percent cobbles.

Oe--1 to 0 inches; needles and twigs; abrupt smooth boundary

A1--0 to 3 inches; dark grayish brown (10YR 4/2) very gravelly silt loam, very dark brown (10YR 2/2) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and nonplastic; many very fine roots; many very fine tubular pores; 35 percent pebbles and 5 percent cobbles; mildly alkaline (pH 7.6); abrupt wavy boundary.

A2--3 to 13 inches; dark brown (10YR 4/3) very gravelly silt loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and nonplastic; many very fine, and common fine, medium and coarse roots; many very fine interstitial pores; 45 percent pebbles and 5 percent cobbles; slightly effervescent; mildly alkaline (pH 7.6); clear wavy boundary.

Bk1--13 to 32 inches; brown (10YR 5/3) extremely gravelly silt loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and nonplastic; many very fine and common fine, medium and coarse roots; many fine interstitial pores; common thick lime coats and pendants on undersides of rock fragments; 50 percent pebbles and 15 percent cobbles; strongly effervescent; mildly alkaline (pH 7.8); clear boundary.

Bk2--32 to 37 inches; pale brown (10YR 6/3) extremely gravelly silt loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, very friable, slightly sticky and nonplastic; many very fine, few fine and medium roots; many fine interstitial pores; common fine filaments and soft masses of lime; many thick lime coats and pendants on undersides of rock fragments; 70 percent pebbles and 5 percent cobbles; violently effervescent; moderately alkaline (pH 8.0); clear wavy boundary.

Bk3--37 to 60 inches; pale brown (10YR 6/3) extremely gravelly loam, yellowish brown (10YR 5/4) moist;

massive; soft, very friable, slightly sticky and nonplastic; many very fine, common fine and medium roots; many fine interstitial pores; common thick lime coats and pendants on undersides of rock fragments; 65 percent pebbles and 10 percent cobbles; violently effervescent; moderately alkaline (pH 8.0).

Type location: Elko County, Nevada; approximately 20 miles southwest of Wendover in the Goshute Mountains; 1,000 feet south and 200 feet east of the northwest corner of section 21, T.31 N., R.68 E.; (40 degrees, 32 minutes, 59 seconds north latitude and 114 degrees, 18 minutes, 07 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually moist, moist late fall through early summer, dry mid summer through mid fall.

Soil temperature: 38 to 45 degrees F.

Summer soil temperature: 43 to 47 degrees F.

Depth to base of mollic epipedon: 30 or more inches.

Depth to calcic horizon: 30 to 40 inches.

Control section:

Clay content--20 to 27 percent.

Rock fragments--Averages 60 to 85 percent, with 40 to 60 percent pebbles and 10 to 25 percent cobbles and stones.

Calcium carbonate equivalent (Less than 20 millimeter fraction)--40 to 50 percent. Fine earth fraction contains 4 to 20 percent.

A horizons:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--2 or 3.

Reaction--Mildly alkaline or moderately alkaline.

Bk horizons:

Value--4 through 6 dry, 2 through 5 moist.

Chroma--2 through 4.

Structure--Weak to moderate, fine or medium, subangular blocky or massive.

Consistence--Soft to hard, very friable or friable, nonplastic or slightly plastic.

Reaction--Mildly alkaline or moderately alkaline in upper part and moderately alkaline in lower part.

Other features--Secondary lime occurs as fine filaments and soft masses and as coatings or pendants on rock fragments.

Hardzem Series

The Hardzem series consists of moderately deep, well drained soils that formed in residuum and colluvium from

limestone and calcareous shale. Hardzem soils are on mountains. Slopes are 30 to 75 percent. The mean annual precipitation is about 30 inches and the mean annual temperature is about 41 degrees F.

Taxonomic class: Loamy-skeletal, mixed Typic Cryoboralfs

Typical pedon: Hardzem channery loam located in an area of map unit 1200. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 30 percent pebbles and 15 percent cobbles.

Oi--1 to 0 inches; white fir needles and twigs.

A--0 to 5 inches; grayish brown (10YR 5/2) channery loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, few fine and medium roots; many very fine interstitial pores; 20 percent channers; mildly alkaline (pH 7.7); clear smooth boundary.

Bt1--5 to 18 inches; pale brown (10YR 6/3) very channery loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, medium and coarse roots; many fine tubular pores; few thin clay films on faces of peds and lining pores; 35 percent channers; mildly alkaline (pH 7.7); gradual wavy boundary.

Bt2--18 to 28 inches; pale brown (10YR 6/3) extremely channery loam, yellowish brown (10YR 5/4) moist; weak coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, common fine, medium and coarse roots; many fine interstitial pores; common thin clay films on faces of peds and lining pores; 70 percent channers; thin lime coats and pendants on undersides of channers; mildly alkaline (pH 7.8); clear wavy boundary.

Cr--28 to 55 inches; highly fractured interbedded limestone and shale.

Type location: Elko County, Nevada; approximately 2 miles southeast of the Dead Cedar Mine, in the Goshute Mountains; 100 feet south and 2,400 feet west of the northeast corner of section 9, T.30 N., R.68 E.; (40 degrees, 29 minutes, 35 seconds north latitude and 114 degrees, 18 minutes, 14 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually moist, moist late fall through early summer, dry mid-summer through mid-fall.

Soil temperature: 41 to 45 degrees F.

Summer soil temperature: 43 to 47 degrees F.

Depth to argillic horizon: 1 to 3 inches.

Depth to weathered bedrock: 20 to 40 inches.

Control section:

Clay content--20 to 30 percent.

Rock fragments--45 to 80 percent, dominantly channers, but including 5 to 15 percent flagstones.

A horizon:

Value--4 or 5, 2 or 3 moist.

Chroma--2 or 3.

Bt horizon:

Hue--10YR or 7.5YR.

Value--6 or 7, 4 or 5 moist.

Chroma--3 through 6.

Texture--Loam or clay loam.

Structure--Weak to strong, very fine to coarse subangular blocky.

Consistence--Soft or slightly hard dry, slightly sticky or sticky and slightly plastic or plastic wet.

Other features--Some pedons have thin lime coats and pendants on undersides of rock fragments in lower subhorizons.

Haunchee Series

The Haunchee series consists of shallow, well drained soils that formed in residuum from limestone and dolomite. Haunchee soils are on mountains. Slopes are 15 to 75 percent. The mean annual precipitation is about 16 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic Cryic Lithic Rendolls

Typical pedon: Haunchee very gravelly loam in an area of map unit 520. The soil surface is partially covered by approximately 50 percent pebbles and 5 percent cobbles. (Colors are for dry soil unless otherwise noted.)

A1--0 to 4 inches; dark brown (10YR 3/3) very gravelly loam, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine and few fine and medium roots; common very fine tubular pores; 30 percent pebbles and 5 percent cobbles; violently effervescent (32% calcium carbonate equivalent in the less than 2 millimeter fraction); moderately alkaline (pH 8.0); clear smooth boundary.

A2--4 to 11 inches; dark grayish brown (10YR 4/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure;

slightly hard, very friable, nonsticky and nonplastic; 35 percent pebbles and 15 percent cobbles; violently effervescent (38% calcium carbonate equivalent in the less than 2 millimeter fraction); moderately alkaline (pH 8.0).

R--11 inches; fractured limestone.

Type location: Elko County, Nevada; located in the Cherry Creek Mountains; approximately 2,000 feet south and 1,400 feet east of the northwest corner of section 16, T.26 N., R.63 E.; (40 degrees, 07 minutes, 50 seconds north latitude and 114 degrees, 52 minutes, 38 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually moist, moist mid fall through early summer, dry mid summer through early fall.

Soil temperature: 42 to 46 degrees F.

Summer soil temperature: 55 to 59 degrees F.

Depth to bedrock: 10 to 20 inches.

Reaction: Mildly alkaline or moderately alkaline in the surface layer and moderately alkaline or strongly alkaline below.

Effervescence: Strongly effervescent or violently effervescent throughout.

Calcium carbonate equivalent: 40 to 70 percent.

Control section:

Clay content--10 to 20 percent.

Texture--Very fine sandy loam and loam.

Rock fragments--35 to 60 percent mainly pebbles with up to 20 percent stones and cobbles in some pedons.

A horizon:

Hue--10YR or 7.5YR.

Value--3 through 5 dry, 2 or 3 moist.

Chroma--2 or 3.

Heechee Series

The Heechee series consists of very deep, well drained soils that formed in mixed alluvium. Heechee soils are on fan piedmonts and fan piedmont remnants. Slopes are 2 to 15 percent. The mean annual precipitation is about 14 inches; the mean annual temperature is about 43 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Typic Argixerolls

Typical pedon: Heechee cobbly loam located in an area of map unit 1700. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered

by approximately 20 percent pebbles and 10 percent cobbles.

A1--0 to 3 inches; brown (10YR 5/3) cobbly loam, very dark grayish brown (10YR 3/2) moist; weak very thick platy parting to fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, few fine, medium and coarse roots; common very fine interstitial pores; 15 percent pebbles and 10 percent cobbles; slightly acid (pH 6.2); clear smooth boundary.

A2--3 to 7 inches; brown (10YR 5/3) cobbly loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and few fine to coarse roots; many very fine, few fine and medium interstitial pores; 15 percent pebbles and 10 percent cobbles; slightly acid (pH 6.2); clear smooth boundary.

2Bt--7 to 20 inches; brown (10YR 5/3) very gravelly sandy clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, sticky and plastic; weak very fine to coarse roots; common very fine, few fine and medium interstitial and tubular pores; few thin clay films as coats and bridging sand grains and lining pores; 35 percent pebbles and 15 percent cobbles; neutral (pH 6.6); gradual smooth boundary.

3C--20 to 60 inches; brownish yellow (10YR 6/6) extremely cobbly coarse sandy loam, dark yellowish brown (10YR 4/6) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine to coarse roots; common very fine interstitial pores; 35 percent pebbles, 35 percent cobbles, and 5 percent stones; slightly acid (pH 6.4).

Type location: Elko County, Nevada; approximately one mile south of the Ruby Valley Forest Service Station; 200 feet north and 2,000 feet east of the southwest corner of section 20, T.33 N., R.60 E.; (40 degrees, 43 minutes, 11 seconds north latitude and 115 degrees, 13 minutes, 45 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually moist; moist in winter and spring, dry mid July through early October.

Soil temperature: 44 to 47 degrees F.

Mollic epipedon thickness: 12 to 20 inches, includes the upper part of the argillic horizon, and in some pedons the whole argillic horizon.

Depth to base of argillic horizon: 20 to 40 inches.

Reaction: Slightly acid or neutral.

Other features: In some small areas on plateaus, some pedons are recognized with a paralithic contact at 50 to 60 inches.

Control section:

Clay content--25 to 35 percent.

Rock fragments--35 to 60 percent; 20 to 45 percent pebbles, 15 to 25 percent cobbles, 0 to 10 percent stones.

A horizons:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--1 through 3.

Bt horizon:

Hue--7.5YR or 10YR.

Value--4 through 6 dry, 3 through 5 moist.

Chroma--2 through 4.

Texture--Clay loam, sandy clay loam, or loam.

Structure--Prismatic, angular blocky, or subangular blocky.

C horizon:

Hue--7.5YR or 10YR.

Value--5 or 6 dry, 3 or 4 moist.

Chroma--4 through 6.

Texture--Loam, sandy loam; coarse sandy loam and coarser textures are common in some pedons below 40 inches.

Rock fragments--60 to 80 percent, mainly cobbles and stones.

Consistence--Soft to hard dry, nonsticky or slightly sticky and nonplastic or slightly plastic wet.

Structure--Subangular blocky or massive.

Heist Series

The Heist series consists of very deep, well drained, soils that formed in mixed alluvium. Heist soils are on inset fans and fan skirts. Slopes are 0 to 4 percent. The mean annual temperature is about 47 degrees F. and the mean annual precipitation is about 10 inches.

Taxonomic class: Coarse-loamy, mixed (calcareous), mesic Xeric Torriorthents

Typical pedon: Heist fine sandy loam in an area of map unit 1581. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 35 percent pebbles.

A--0 to 4 inches; light gray (10YR 7/2) fine sandy loam, dark grayish brown (10YR 4/2) moist; moderate

medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, few fine and medium roots; common very fine interstitial pores; 10 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

C1--4 to 17 inches; very pale brown (10YR 7/3) fine sandy loam, brown (10YR 5/3) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; few very fine to medium roots; common very fine interstitial pores; 10 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

Ck--17 to 32 inches; very pale brown (10YR 7/3) sandy loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine and few fine to medium roots; few very fine interstitial pores; 10 percent pebbles; few thin soft masses of lime; violently effervescent; moderately alkaline (pH 8.2); clear wavy boundary.

C2--32 to 40 inches; very pale brown (10YR 7/3) fine sandy loam, brown (10YR 5/3) moist; massive; soft, very friable, slightly sticky and slightly plastic; few very fine and fine roots; few very fine interstitial pores; 3 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

C3--40 to 60 inches; very pale brown (10YR 7/3) gravelly fine sandy loam, brown (10YR 5/3) moist; massive; soft, very friable, slightly sticky and slightly plastic; few very fine roots; few very fine and fine interstitial pores; few thin 1 to 2 millimeter lime coats and pendants on coarse fragments; 15 percent pebbles; violently effervescent; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; approximately 12 miles southeast of White Horse Pass; about 2,800 feet north and 100 feet east of the southwest corner of section 5, T.27 N., R.70 E.; (40 degrees, 14 minutes, 25 seconds north latitude and 114 degrees, 06 minutes, 21 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry; moist in winter and spring.

Soil temperature: 48 to 52 degrees F.

Control section:

Clay content--8 to 18 percent.

Rock fragments--0 to 15 percent, mainly pebbles

Texture--Fine sandy loam or sandy loam.

A horizon:

Hue--7.5YR or 10YR.

Value--5 through 7 dry, 3 through 5 moist. The value of 5 dry and 3 moist occurs in the upper 4 inches of this horizon.

Chroma--2 through 4.

Effervescence--Slightly effervescent or strongly effervescent. Some pedons are non-effervescent in the upper 3 inches.

Reaction--Neutral through moderately alkaline.

C horizon:

Hue--7.5YR or 10YR.

Value--6 or 7 dry, 4 through 6 moist.

Chroma--2 through 4.

Texture--Fine sandy loam or sandy loam above 40 inches and includes loamy sand below 40 inches.

Rock fragments--0 to 15 percent, mainly pebbles

Consistence--Soft to hard, dry; very friable or friable, moist.

Carbonates--Subhorizons have discontinuous weak lime cementation or visible secondary carbonates.

Reaction--Mildly alkaline to strongly alkaline.

Hendap Series

The Hendap series consists of shallow, well drained soils that formed in residuum and colluvium from granitic rocks including calcareous loess. Hendap soils are on mountains. Slopes are 15 to 50 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Lithic Haploxerolls

Typical pedon: Hendap very stony coarse sandy loam, in an area of map unit 471. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 30 percent pebbles, 5 percent cobbles, and 5 percent stones.

Oj--1 to 0 inches; slightly decomposed pinyon and juniper needles, twigs, cones and berries; slightly effervescent; abrupt smooth boundary.

A1--0 to 1 inch; dark grayish brown (10YR 4/2) very stony coarse sandy loam, very dark brown (10YR 2/2) moist; moderate medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine and fine interstitial pores; 30 percent pebbles, 10 percent cobbles, and 10 percent stones; slightly effervescent; mildly alkaline (pH 7.6); abrupt smooth boundary.

A2--1 to 7 inches; grayish brown (10YR 5/2) very stony coarse sandy loam, very dark brown (10YR 2/2) moist; moderate medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine, fine, and few medium roots; 30 percent pebbles, 10 percent cobbles, and 10 percent stones; strongly effervescent (less than 2 percent calcium carbonate equivalent); mildly alkaline (pH 7.6); abrupt smooth boundary.

C--7 to 13 inches; light brownish gray (10YR 6/2) extremely gravelly loamy coarse sand, grayish brown (10YR 5/2) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine, fine, medium and common coarse roots; 55 percent pebbles and 5 percent cobbles; violently effervescent (4 percent calcium carbonate equivalent); mildly alkaline (pH 7.8); clear irregular boundary.

R--13 inches; granitic bedrock; highly weathered in the upper 4 inches.

Type location: Elko County, Nevada; approximately 550 feet south and 1,450 feet west of the northeast corner of section 33, T.28N., R.68 E.; (40 degrees, 15 minutes, 37 seconds north latitude and 114 degrees, 18 minutes, 00 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist late fall through early spring, dry late spring through mid fall.

Soil temperature: 47 to 52 degrees F.

Mollic epipedon: 7 to 10 inches thick.

Depth to bedrock: 10 to 20 inches.

Control section:

Clay content--6 to 12 percent.

Rock fragments--Averages 40 to 70 percent, dominantly 2 to 5 millimeter granitic fragments. 30 to 65 percent pebbles, 5 to 20 percent cobbles, 0 to 5 percent stones.

A horizons:

Calcium carbonate equivalent--1 to 5 percent of the less than 2 millimeter fraction.

C horizon:

Texture--Loamy coarse sand or coarse sandy loam.

Calcium carbonate equivalent--1 to 10 percent of the less than 2 millimeter fraction.

Holborn Series

The Holborn series consists of very shallow well drained soils that formed in residuum and colluvium from tuffs. Holborn soils are on partial ballenas, hills, and rock pediment remnants. Slopes are 4 to 30 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Loamy, mixed (calcareous), mesic, shallow Xeric Torriorthents

Typical pedon: Holborn gravelly loam, 4 to 15 percent slopes, is located in an area of map unit 250. (Colors are for dry soils unless otherwise noted.)

A--0 to 3 inches; light brownish gray (10YR 6/2) gravelly loam, dark grayish brown (10YR 4/2) moist; weak fine granular; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine interstitial pores; 20 percent pebbles; strongly effervescent; moderately alkaline (pH 8.2) abrupt wavy boundary.

Bk--3 to 7 inches; pale brown (10YR 6/3) gravelly loam, brown (10YR 4/3) moist; massive; slightly hard, friable, sticky and plastic; common very fine and fine roots; common fine tubular pores; 20 percent pebbles; few thin lime coats on undersides of pebbles; violently effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary.

Cr--7 to 20 inches; soft tuff.

Type location: Elko County, Nevada; approximately 3 miles east of Cobre, about 2,000 feet south and 800 feet west of the northeast corner of section 12, T.37 N., R.67 E., (41 degrees, 06 minutes, 22 seconds north latitude and 114 degrees, 20 minutes, 07 seconds east longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry June through October.

Soil temperature: 47 to 52 degrees F.

Depth to paralithic contact: 6 to 10 inches.

Control section:

Clay content--Averages 18 to 30 percent.

Rock fragments--15 to 35 percent, mainly pebbles.

Reaction--Moderately alkaline or strongly alkaline.

Calcium carbonate equivalent--Averages 5 to 30 percent.

Effervescence--Strongly effervescent or violently effervescent.

A horizon:

Value--5 or 6 dry, 3 or 4 moist.

Chroma--2 or 3.

Other features--Combined thickness of the A horizon is 2 to 6 inches.

Bk horizon:

Hue--2.5YR or 10YR.

Value--5 through 7 dry, 4 through 6 moist.

Chroma--3 or 4.

Texture--Loam or clay loam.

Hopeka Series

The Hopeka series consist of very shallow, well drained soils that formed in residuum and colluvium from limestone. Hopeka soils are on mountains. Slopes are 30 to 75 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, frigid Lithic Xeric Torriorthents

Typical pedon: Hopeka very gravelly loam located in an area of map unit 154. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 60 percent pebbles and 5 percent cobbles.

A1--0 to 3 inches; light brownish gray (10YR 6/2) very gravelly loam, dark grayish brown (10YR 4/2) moist; weak thick platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine interstitial pores; 40 percent pebbles; thin lime coats and pendants on undersides of pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

A2--3 to 6 inches; pale brown (10YR 6/3) very gravelly loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine and few medium roots; common very fine interstitial pores; 45 percent pebbles; thin lime coats and pendants on undersides of pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

C--6 to 10 inches; pale brown (10YR 6/3) very gravelly loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, slightly

sticky and slightly plastic; few fine and medium roots; common very fine interstitial pores; 50 percent pebbles; thin lime coats and pendants on undersides of pebbles; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

R--10 inches; limestone.

Type location: Elko County, Nevada; approximately 2 1/2 miles southeast of Moor Summit; located in an unsectionized area 100 feet north and 1,600 feet east of the projected southwest corner of section 13, T.37 N., R.63 E.; (41 degrees, 04 minutes, 58 seconds north latitude and 114 degrees, 48 minutes, 27 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry; moist in winter and spring, dry June through mid October.

Depth to bedrock: 4 to 10 inches.

Soil temperature: 43 to 47 degrees.

Carbonates: 40 to 85 percent calcium carbonate equivalent.

Effervescence: Violently effervescent, but some surface layers are strongly effervescent.

Control section:

Clay content--18 to 27 percent.

Rock fragments--35 to 60 percent limestone, calcite or dolostone pebbles, cobbles, or stones.

Reaction--Moderately alkaline or strongly alkaline.

A horizons:

Hue--10YR or 7.5YR.

Value--5 through 7 dry, 3 or 4 moist.

Chroma--2 or 3.

C horizon:

Hue--10YR or 7.5YR.

Value--5 through 7 dry, 3 or 4 moist.

Chroma--2 or 3.

Structure--Weak to moderate subangular blocky or it is massive.

Consistence--Soft or slightly hard dry, very friable or friable.

Hulderman Series

The Hulderman series consists of very deep, poorly drained soils that formed in mixed loamy alluvium over lacustrine sand. Hulderman soils are on floodplains. Slopes are 0 to 2 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Fine-loamy over sandy or sandy-skeletal, mixed, mesic, Duric Endoaquolls

Typical pedon: Hulderman fine sandy loam, in an area of map unit 1380. (Colors are for dry soil unless otherwise noted.)

- A1--0 to 5 inches; gray (10YR 5/1) fine sandy loam, very dark gray (10YR 3/1) moist; moderate medium platy structure; slightly hard, firm, slightly sticky and slightly plastic; common very fine, fine, and few medium roots; common fine tubular pores; strongly effervescent; strongly alkaline (pH 8.5); clear smooth boundary.
- Ab2--5 to 15 inches; very dark gray (10YR 3/1) loam, black (10YR 2/1) moist; few fine distinct yellowish brown (10YR 5/6) iron mottles; moderate to strong fine and medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; many very fine, fine and few medium roots; common fine tubular and few fine interstitial pores; noneffervescent; moderately alkaline (pH 8.0); clear wavy boundary.
- Bq1--15 to 18 inches; pale olive (5Y 6/3) loam, olive (5Y 4/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine and few medium roots; common fine tubular and interstitial pores; discontinuous brittle matrix; noneffervescent; moderately alkaline (pH 8.2); clear wavy boundary.
- 2Bq2--18 to 27 inches; pale yellow (5Y 7/3) loamy sand, olive (5Y 5/3) moist; massive; hard, firm and brittle, nonsticky and nonplastic; few very fine, fine and medium roots; common fine tubular and interstitial pores; continuous brittle matrix; noneffervescent; moderately alkaline (pH 7.9); abrupt smooth boundary.
- 2C--27 to 60 inches; pale yellow (2.5Y 8/4) sand, light yellowish brown (2.5Y 6/4) moist; massive structure parting to single grain structure; soft parting to loose, nonsticky and nonplastic; few fine roots; many very fine interstitial pores; 5 percent fine pebbles; moderately alkaline (pH 7.9).

Type location: Elko County, Nevada; about 17 miles south of Wells in Clover Valley; in an unsectionized area approximately 700 feet west and 2,200 feet north of the projected southeast corner of section 17, T.34 N., R.63 E.; (40 degrees, 49 minutes, 40 seconds north latitude and 114 degrees, 52 minutes, 28 seconds west longitude.)

Range in characteristics:

Soil moisture: Saturated near the surface for at least one month during most years, mainly during late winter through late spring.

Soil temperature: 47 to 52 degrees F.

Mollic epipedon thickness: 12 to 20 inches.

Depth to contrasting horizon: 12 to 25 inches.

Control section:

Clay content--20 to 25 percent in the upper part and less than 8 percent in the lower part.

A horizons:

Value--3 through 5 dry, 1 through 3 moist.
Chroma--1 or 2.

Bq horizons:

Hue--5Y or 2.5Y.
Value--6 or 7 dry, 3 through 5 moist.
Chroma--3 or 4.
Cementation--Continuous and discontinuous brittle matrix.

2C horizon:

Hue--5Y or 2.5Y.
Value--7 or 8 dry, 6 or 7 moist.
Chroma--4 or 5.
Texture--Sand or fine sand. Thin subhorizons are modified by up to 25 percent pebbles.
Other features--Thin strata of silty clay loam or silty clay may occur in some pedons below 40 inches.

Hundraw Series

The Hundraw series consists of very shallow, well drained soils that formed in residuum and colluvium from tuffs. Hundraw soils are on fan piedmont remnants. Slopes are 2 to 30 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy, mixed (calcareous), mesic, shallow Xeric Torriorthents.

Typical pedon: Hundraw gravelly fine sandy loam in an area of map unit 241. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 30 percent pebbles and 5 percent cobbles.

A1--0 to 2 inches; light gray (10YR 7/2) gravelly fine sandy loam, grayish brown (10YR 5/2) moist; moderate thick platy structure; slightly hard, very friable, nonsticky and nonplastic; common very fine roots; common very fine tubular and common very fine and fine vesicular pores; 20 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary.

A2--2 to 5 inches; light gray (10YR 7/2) gravelly fine sandy loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; 30 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bk--5 to 10 inches; light gray (10YR 7/2) fine sandy loam, brown (10YR 5/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine, fine and few medium roots; 10 percent pebbles; few thin lime coats on undersides of pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.

Cr--10 inches; tuff; violently effervescent.

Type location: Elko County, Nevada; approximately 1,975 feet south and 2,425 feet west of the northeast corner of section 13, T.37 N., R.67 E.; (41 degrees, 05 minutes, 33 seconds north latitude and 114 degrees, 20 minutes, 30 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in the winter and spring, dry June through October.

Soil temperature: 47 to 52 degrees F.

Depth to paralithic contact: 4 to 10 inches.

Control section:

Clay content--8 to 18 percent.

Rock fragments--Averages 5 to 20 percent, mainly pebbles.

Effervescence--Strongly effervescent or violently effervescent.

Calcium carbonate equivalent--5 to 15 percent.

A horizons:

Hue--10YR, 2.5Y and 5Y.

Value--6 or 7 dry, 3 through 5 moist.

Chroma--2 through 4.

Bk horizon:

Hue--10YR, 2.5Y and 5Y.

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 through 4.

Texture--Fine sandy loam or loam.

Clay content--8 to 18 percent.

Rock fragments--Averages 5 to 15 percent, mostly pebbles.

Structure--Weak or moderate, fine or medium subangular blocky.

Hunnton Series

The Hunnton series consists of moderately deep over a duripan, well drained soils that formed in mixed alluvium influenced by loess high in volcanic ash. Hunnton soils are on fan piedmont remnants. Slopes are 2 to 8 percent. The mean annual precipitation is about 9 inches and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Xerollic Durargids

Typical pedon: Hunnton silt loam located in an area of map unit 260. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 5 percent pebbles.

A1--0 to 5 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak thick platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine and few medium roots; many very fine tubular pores; mildly alkaline (pH 7.8); clear smooth boundary.

A2--5 to 8 inches; pale brown (10YR 6/3) silt loam, dark brown (10YR 3/3) moist; weak thin platy structure parting to weak medium subangular blocky; soft, very friable, slightly sticky and slightly plastic; many very fine, fine and common medium roots; many very fine tubular pores; mildly alkaline (pH 7.8); clear smooth boundary.

Bt1--8 to 12 inches; pale brown (10YR 6/3) clay loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, friable, sticky and plastic; common very fine, few fine and medium roots; many very fine and fine tubular pores; few thin clay films on faces of peds and lining pores; moderately alkaline (pH 8.0); abrupt smooth boundary.

Bt2--12 to 21 inches; very pale brown (10YR 7/3) gravelly clay, yellowish brown (10YR 5/4) moist; moderate medium subangular blocky structure; hard, firm, sticky and plastic; common very fine, few fine and medium roots; many very fine and fine tubular pores; common moderately thick clay films on faces of peds and lining pores; 20 percent pebbles; moderately alkaline (pH 8.2); abrupt smooth boundary.

Bqkm--21 to 40 inches; white (10YR 8/2) indurated duripan, very pale brown (10YR 7/3) moist; massive; very hard, very firm, brittle; continuous 1 to 2 millimeter laminar cap; violently effervescent.

Type location: Elko County, Nevada; approximately 3 miles northeast of Moore Summit; located in an unsectionized area, 1,800 feet south and 1,600 feet west of the projected northeast corner of section 5, T.37 N., R.64 E.; (41 degrees, 07 minutes, 13 seconds north latitude and 114 degrees, 45 minutes, 48 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist mid fall through spring, dry from summer through early fall.

Soil temperature: 47 to 52 degrees F.

Depth to duripan: 20 to 40 inches.

Depth to lime: 19 to 32 inches.

Other features: Some pedons have a 4 to 11 inch thick continuously and/or discontinuous weakly silica cemented Bkq or Bq horizon above the duripan.

Control section:

Clay content--40 to 55 percent

Rock fragments--Average 5 to 25 percent

A horizons:

Value--5 or 6 dry, 3 or 4 moist.

Chroma--2 or 3.

Reaction--Neutral through moderately alkaline.

Bt horizons:

Hue--10YR or 7.5YR.

Value--5 through 7 dry, 3 through 5 moist.

Chroma--2 through 4.

Texture--Clay or gravelly clay.

Clay content--40 to 55 percent.

Rock fragments--Up to 25 percent, mainly pebbles.

Structure--Weak or moderate, very fine to medium subangular or angular blocky or prismatic.

Consistence--Slightly hard to very hard dry; sticky or very sticky and plastic or very plastic, wet.

Reaction--Neutral through moderately alkaline.

Effervescence--Noneffervescent in the upper subhorizons, none to strongly in lower subhorizons.

Other features:--Some pedons have a 4 to 7 inch thick loam, silty clay loam or clay loam Bt1 horizon with thin clay films. Some pedons have lime masses and silica concretions in the lower portion of the horizon. Lower subhorizons have up to 15 percent durinodes in some pedons.

Bqkm horizons:

Value--7 or 8 dry, 4 through 7 moist.

Chroma--2 or 3 dry, 3 or 4 moist.

Structure--Massive, or has weak medium to very thick platy structure.

Other features:--Some pedons have strongly silica cemented horizons with 40 to 60 percent pebbles below the indurated duripan.

Hussa Series

The Hussa series consists of very deep, very poorly and poorly drained soils that formed in mixed loamy alluvium with a component of vitric pyroclastic materials. Hussa soils are on flood plains adjacent to fan piedmont remnants. Slopes are 0 to 2 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Fine-loamy, mixed (calcareous), frigid Fluvaquentic Haplaquolls

Typical pedon: Hussa silt loam is located in Elko County, Nevada, Central Part. (Colors are for dry soil unless otherwise noted.)

A1--0 to 4 inches; gray (10YR 5/1) silt loam, very dark gray (10YR 3/1) moist; moderate fine granular structure; slightly hard, very friable, sticky and plastic; many very fine and few fine roots; violently effervescent; moderately alkaline (pH 8.0); clear smooth boundary.

A2--4 to 16 inches; gray (10YR 5/1) silty clay loam, very dark grayish brown (10YR 3/2) moist; few fine distinct yellowish brown (10YR 5/6) iron mottles; moderate medium subangular blocky structure; slightly hard, friable, very sticky and very plastic; common fine and few very fine roots; common fine tubular and common very fine interstitial pores; violently effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary.

C1--16 to 21 inches; gray (10YR 6/1) clay loam, dark grayish brown (10YR 4/2) moist; few fine faint brown (10YR 4/3) iron mottles; massive; hard, firm, sticky and plastic; few very fine roots; common very fine and few fine tubular pores; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

C2--21 to 36 inches; light gray (10YR 7/1) clay loam, grayish brown (10YR 5/2) moist; massive; hard, firm, sticky and plastic; few very fine roots; many very fine interstitial and few fine tubular pores; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

Ab--36 to 50 inches; dark grayish brown (10YR 4/2) clay loam, very dark grayish brown (10YR 3/2) moist; massive; hard, firm, sticky and plastic; few fine tubular pores; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Cg--50 to 60 inches; grayish brown (2.5Y 5/2) clay loam, very dark grayish brown (2.5Y 3/2) moist; many medium prominent brown (10YR 4/3) iron mottles, and common medium prominent dark greenish gray (5GY 4/1) mottles; massive; very hard, firm, very sticky and very plastic; violently effervescent; moderately alkaline(pH 8.4)

Type location: Elko County, Nevada; approximately 2 miles north of Lamoille; about 900 feet west and 2,600 feet north of the southeast corner of section 8, T.33 N., R.58 E.; (40 degrees, 45 minutes, 30 seconds north latitude and 115 degrees, 27 minutes, 13 seconds west longitude.)

Range in characteristics:

Soil moisture: These soils are saturated at or near the surface for at least one month during most years.

Drained phases are recognized.

Soil temperature: 44 to 47 degrees F.

Mollic epipedon: 12 to 24 inches.

Control section:

Clay content--25 to 35 percent.

Texture--Stratified sandy clay loam to silty clay loam.

Some pedons have thin strata of loam, fine sandy loam, and sandy loam.

Rock fragments--0 to 15 percent. Some pedons have thin horizons with up to 35 percent pebbles.

Reaction--Moderately alkaline to strongly alkaline.

Carbonates--Few or common fine or medium white lime segregations can occur in any horizon but are not common in horizons above the water table.

Effervescence--Effervescent in the upper 20 to 30 inches but may be non-effervescent below this depth in some pedons.

Other features--A root mat (Oe horizon), up to 4 inches thick is present in some areas that have not been cultivated.

A horizons:

Hue--10YR or 2.5Y.

Value--4 or 5 dry, 2 or 3 moist.

Chroma--1 or 2.

Other features--One to several buried A horizons occur throughout the profile.

C horizons:

Hue--10YR or 2.5Y.

Value--5 through 7 dry, and 3 through 5 moist.

Chroma--1 through 3.

Structure--Subangular blocky or it is massive.

Texture--Stratified loam to silty clay loam. Thin strata of fine sandy loam, silty clay or clay may occur below 40 inches.

Clay content--Averages 25 to 35 percent.

Rock fragments--Averages 0 to 15 percent.

Other features--This horizon contains faint to prominent iron, manganese, or organic matter stains.

Hutchley Series

The Hutchley series consists of shallow, well drained, moderately, slowly permeable soils that formed in residuum and colluvium from rhyolite. Hutchley soils are on mountains. Slopes are 8 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Lithic Argixerolls

Typical pedon: Hutchley very gravelly loam located in an area of map unit 1030. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 35 percent pebbles and 10 percent cobbles.

A--0 to 1 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate medium platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine roots; common very fine vesicular pores; 35 percent pebbles and 5 percent cobbles; mildly alkaline (pH 7.6); clear smooth boundary.

AB--1 to 4 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; and common very fine tubular pores; 35 percent pebbles and 5 percent cobbles; mildly alkaline (pH 7.6); clear smooth boundary.

Bt1--4 to 7 inches; brown (10YR 4/3) very gravelly clay loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine roots; common very fine tubular pores; 40 percent pebbles and 10 percent cobbles; few thin clay films on faces of peds and lining pores; mildly alkaline (pH 7.6); clear smooth boundary.

Bt2--7 to 13 inches; brown (10YR 4/3) very gravelly clay loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; hard, friable, sticky and plastic; common very fine roots; few very fine tubular

pores; 40 percent pebbles, 10 percent cobbles, and 5 percent stones; few thin clay films on faces of peds and lining pores; mildly alkaline (pH 7.8); abrupt wavy boundary.

R--13 inches; rhyolite.

Type location: Elko County, Nevada; approximately 8 miles east of Odgers Ranch in the Cherry Creek Mountains; 2,100 feet south and 800 feet east of the northwest corner of section 29, T.28 N., R.63 E.; (40 degrees, 16 minutes, 34 seconds north latitude and 114 degrees, 54 minutes, 00 seconds west longitude.)

Range in characteristics:

Soil temperature: 42 to 47 degrees F.

Thickness of mollic epipedon: 10 to 20 inches.

Depth to bedrock: 10 to 20 inches.

Control section:

Clay content--24 to 35 percent.

Rock fragments--45 to 70 percent.

A horizon:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--2 or 3 dry or moist.

Reaction--Neutral to mildly alkaline.

AB horizon:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--2 or 3 dry or moist.

Reaction--Neutral to mildly alkaline.

Bt1 horizon:

Value--4 or 5 dry.

Chroma--2 or 3 dry or moist.

Clay content--24 to 35 percent.

Rock fragments--15 to 65 percent pebbles, 5 to 30 percent cobbles.

Texture--Loam or clay loam.

Reaction--Neutral to mildly alkaline.

Bt2 horizon:

Value--4 or 5 dry, 3 or 4 moist.

Chroma--2 to 4 dry or moist.

Texture--Clay loam.

Clay content--28 to 35 percent.

Rock fragments--15 to 50 percent pebbles, 5 to 45 percent cobbles, 0 to 10 percent stones.

Reaction--Neutral to mildly alkaline.

Hyzen Series

The Hyzen series consists of shallow and very shallow, well drained soils that formed in residuum and colluvium from limestone and dolomite. Hyzen soils are on mountains and hills. Slopes are 15 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 40 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, frigid Lithic Haploxerolls

Typical pedon: Hyzen extremely stony loam in an area of map unit 990. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 45 percent pebbles, 10 percent stones, and 5 percent cobbles.

A1--0 to 3 inches; grayish brown (10YR 5/2) extremely stony loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many thick lime coats and lime pendants on undersides of rock fragments; 20 percent pebbles, 20 percent cobbles and 20 percent stones; violently effervescent; moderately alkaline (pH 8.3); abrupt wavy boundary.

A2--3 to 8 inches; brown (10YR 5/3) extremely stony loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, common fine and few medium roots; many thick lime coats and few thin lime pendants on undersides of rock fragments; 20 percent pebbles, 20 percent cobbles and 20 percent stones; violently effervescent; moderately alkaline (pH 8.3); clear wavy boundary.

A3--8 to 13 inches; brown (10YR 5/3) extremely stony loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and few fine and medium roots; few thin lime coats on undersides of coarse fragments; 5 percent pebbles, 30 percent cobbles, and 40 percent stones; violently effervescent; moderately alkaline (pH 8.3); abrupt irregular boundary.

R--13 inches; limestone

Type location: Elko County, Nevada; located on White Horse Mountain; approximately 1,900 feet north and 1,050 feet west of the southeast corner of section 22, T.28 N., R.68 E.; (40 degrees, 16 minutes, 53 seconds north latitude and 114 degrees, 17 minutes, 00 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually moist, moist in winter, spring and early summer, dry in late summer and fall.

Soil temperature: 42 to 47 degrees F.

Mollic epipedon thickness: 6 to 14 inches.

Depth to bedrock: 6 to 14 inches.

Calcium carbonate equivalent--40 to 60 percent of the up to 20 millimeter fraction.

Control section:

Clay content--Averages 10 to 18 percent.

Rock fragments--60 to 85 percent with more than half cobbles and stones.

A horizons:

Value--4 or 5 dry.

Chroma--2 or 3

Idway Series

Idway series consists of very deep, well drained soils that formed in mixed alluvium. Idway soils are on alluvial flats, beach plains, and lake plains. Slopes are 0 to 4 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Coarse-loamy over sandy or sandy-skeletal, mixed, mesic Durixerollic Camborthids

Typical pedon: Idway loamy sand, in an area of map unit 730. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 25 percent pebbles.

A--0 to 4 inches; light gray (10YR 7/2) loamy sand, brown (10YR 5/3) moist; strong thick platy structure parting to strong thin platy; slightly hard, very friable, nonsticky and nonplastic; few very fine and fine roots; many very fine and fine tubular pores; 5 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

Bw1--4 to 7 inches; light gray (10YR 7/2) sandy loam, yellowish brown (10YR 5/4) moist; moderate thick platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine interstitial pores and few tubular; 5 percent pebbles; strongly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary.

Bw2--7 to 12 inches; very pale brown (10YR 7/3) sandy loam, yellowish brown (10YR 5/4) moist; weak coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine interstitial pores and few

tubular; 5 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

Bqk1--12 to 20 inches; light gray (10YR 7/2) loam, pale brown (10YR 6/3) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine roots; many very fine interstitial pores and few tubular; 30 percent cylindrical durinodes 1/4 to 1/2 inch in diameter and 1 to 3 inch platy durinodes; 5 percent pebbles; strongly effervescent; strongly alkaline (pH 8.8); clear wavy boundary.

Bqk2--20 to 27 inches; light gray (10YR 7/2) loam, brown (10YR 5/3) moist; light brown (7.5YR 6/4) organic stains on plate surfaces, root mats and along root channels; strong thick platy structure parting to strong thin platy; hard, firm and brittle, slightly sticky and slightly plastic; common very fine roots in pockets and few in matrix; many very fine interstitial pores and few tubular; 50 percent strong brittle matrix, 30 percent weak and 10 percent noncemented pockets of loamy sand; 5 percent pebbles; strongly effervescent; very strongly alkaline (pH 9.4); abrupt wavy boundary.

2C--27 to 60 inches; variegated stratified gravelly coarse sand to sand; massive; soft, very friable, nonsticky and nonplastic; few very fine roots; many very fine interstitial pores; 10 percent 1 to 3 inch thick discontinuous cemented lenses; 30 percent pebbles; few thin lime and silica pendants on undersides of pebbles; slightly effervescent; very strongly alkaline (pH 9.6).

Type location: Elko County, Nevada; approximately 12 miles southeast of Currie, about 2,500 feet west and 2,100 feet south of the northeast corner of section 17, T.26 N., R.65 E.; (40 degrees, 07 minutes, 46 seconds north latitude and 114 degrees, 39 minutes, 53 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in late fall through early spring, dry mid-spring through mid-fall.

Soil temperature: 47 to 52 degrees F.

Depth to Duric horizon: 10 to 20 inches.

Control section:

Clay content--The upper part is 8 to 18 percent and the lower part is 2 to 8 percent.

Rock fragments--Upper part averages 0 to 5 percent and lower part averages 20 to 50 percent.

A horizon:

Value--6 or 7 dry, 3 through 6 moist.

Reaction--Moderately alkaline or strongly alkaline.

Calcium carbonate equivalent--1 to 10 percent.

SAR--1 to 5.

Bw horizons:

Value--6 or 7 dry, 4 or 5 moist.
 Chroma--3 or 4.
 Rock fragments--0 to 5 percent.
 Structure--Platy and subangular blocky.
 Consistence--Nonsticky to slightly sticky.
 Reaction--Moderately alkaline to strongly alkaline.
 Calcium carbonate equivalent--1 to 10 percent.
 SAR--1 to 5.

Bqk horizons:

Value--6 or 7 dry, 5 or 6 moist.
 Chroma--2 or 3.
 Texture--Loam or sandy loam.
 Rock fragments--0 to 5 percent.
 Structure--Platy, subangular blocky or massive.
 Reaction--Strongly alkaline or very strongly alkaline.
 Calcium carbonate equivalent--5 to 15 percent.
 SAR--1 to 5.
 Other features--30 to 80 percent discontinuous silica and lime cementation.

2C horizon:

Texture--Stratified extremely gravelly coarse sand to fine sand.
 Structure--Massive or single grain.
 Reaction--Strongly alkaline or very strongly alkaline.
 Calcium carbonate equivalent--1 to 15 percent of the less than 2 millimeter fraction.
 SAR--1 to 5.
 Other features--0 to 15 percent discontinuous silica and lime cemented matrix.

Izamatch Series

The Izamatch series consists of very deep, somewhat excessively drained soils that formed in re-worked mixed alluvium influenced by calcareous loess. Izamatch soils are on beach plains and fan aprons. Slopes are 2 to 30 percent. The mean annual precipitation is about 6 inches and the mean annual air temperature is about 52 degrees F.

Taxonomic class: Sandy-skeletal, mixed, mesic Typic Torriorthents

Typical pedon: Izamatch gravelly sandy loam, in an area of map unit 1520. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 50 percent pebbles.

A1--0 to 3 inches; light gray (10YR 7/2) gravelly sandy loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine roots; few very fine interstitial pores; 15 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

A2--3 to 13 inches; very pale brown (10YR 7/3) gravelly sandy loam, yellowish brown (10YR 5/4) moist; weak coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine interstitial pores; few thin (1 to 2mm) lime coats on undersides of coarse fragments; 15 percent pebbles; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary.

2Ck1--13 to 22 inches; very pale brown (10YR 7/3) very gravelly loamy sand, yellowish brown (10YR 5/4) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine roots; few very fine interstitial pores; common thin (1 to 2mm) lime coats on undersides of coarse fragments; 50 percent pebbles; violently effervescent; very strongly alkaline (pH 9.2); clear smooth boundary.

3Ck2--22 to 60 inches; very pale brown (10YR 7/3) extremely gravelly coarse sand, brown (10YR 5/3) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine roots; common thin (1 to 2mm) lime coats on undersides of coarse fragments; stratified with thin bands of weak lime cementation, slightly hard and very friable; 70 percent pebbles; violently effervescent; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; approximately 12 miles south of Wendover, Nevada; about 1,500 feet east and 800 feet north of the southwest corner of section 36, T.32 N., R.69 E.; (40 degrees, 35 minutes, 53 seconds north latitude and 114 degrees, 07 minutes, 34 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in some part for short periods during winter and early spring and for 10 to 20 days cumulative between July and October following convection storms.

Soil temperature: 53 to 59 degrees F.

Depth to 2Ck horizon: 10 to 20 inches.

Control section:

Clay content--Averages 0 to 8 percent.

Rock fragments--35 to 75 percent, dominantly pebbles.

A horizon:

Value--5 through 7 dry, 3 through 5 moist.

Chroma--2 through 4.

Reaction--Moderately alkaline to strongly alkaline.
 Organic matter content--Less than 0.5 percent.
 Calcium carbonate equivalent--20 to 30.
 SAR--0 to 5.

2Ck horizon:

Value--6 through 8 dry, 5 or 6 moist.
 Chroma--2 through 4.
 Texture--Loamy sand, sand, or loamy coarse sand.
 Rock fragments--35 to 60 percent, mainly pebbles.
 Structure--Massive or single grain.
 Reaction--Moderately alkaline to very strongly alkaline.
 Calcium carbonate equivalent--20 to 30.
 SAR--5 to 12.

3Ck horizon:

Value--7 or 8 dry, 5 or 6 moist.
 Chroma--2 or 3.
 Texture--Stratified extremely gravelly coarse sand to very gravelly loamy sand.
 Rock fragments--35 to 75 percent.
 Structure--Massive or single grain.
 Reaction--Strongly alkaline to very strongly alkaline.
 Calcium carbonate equivalent--30 to 40.
 SAR--13 to 30.

Izar Series

The Izar series consists of shallow and very shallow somewhat excessively drained soils that formed in residuum and colluvium from tuffs. Izar soils are on fan piedmont remnants. Slopes are 2 to 50 percent. The mean annual precipitation is about 9 inches, and the mean annual temperature is about 46 degrees F.

Taxonomic class: Loamy-skeletal, mixed (calcareous), mesic Lithic Xeric Torriorthents

Typical pedon: Izar very gravelly loam in an area of map unit 252. (Colors are for dry soil unless otherwise noted.)

A--0 to 3 inches; light gray (10YR 7/2) very gravelly loam, light brownish gray (10YR 6/2) moist; moderate thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine, few fine and medium roots; many very fine interstitial, common very fine and fine vesicular pores; 35 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

Bk--3 to 12 inches; light brownish gray (10YR 6/2) very gravelly loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; soft, very friable, slightly

sticky and slightly plastic; common very fine, few fine and medium roots; many very fine and fine tubular pores; few thin lime coats on pebbles; 40 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.

R--12 inches; hard tuff.

Type location: Elko County, Nevada; approximately 7 miles west of Spruce Mountain; about 400 feet south and 2,200 feet west of the northeast corner of section 9, T.31 N., R.62 E.; (40 degrees, 35 minutes, 14 seconds north latitude and 114 degrees, 58 minutes, 35 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist late fall through early spring, dry mid-July through October.

Soil temperature: 47 to 52 degrees F.

Reaction: Mildly alkaline or moderately alkaline.

Calcium carbonate equivalent: 5 to 35 percent.

Other features: Commonly has silica and lime pan fragments covering up to 75 percent of the surface area.

Depth to bedrock: 7 to 14 inches.

Control section:

Clay content--18 to 25 percent.

Rock fragments--40 to 75 percent, mainly pebbles.

A horizon:

Hue--2.5Y or 10YR.

Value--6 or 7 dry, 4 through 6 moist.

Chroma--2 or 3.

Bk horizons:

Hue--2.5Y or 10YR.

Value--6 through 8 dry, 4 or 5 moist.

Chroma--2 through 4.

Structure--Fine or medium subangular blocky.

Consistence--Soft or slightly hard dry, slightly sticky or sticky and slightly plastic or plastic wet.

Lime coats--None to common on undersides of pebbles.

Jackpot Series

The Jackpot series consists of shallow, well drained soils that formed in residuum and colluvium from tuff influenced by ash. Jackpot soils are on side slopes of hills and rock piedmont remnants. Slopes are 4 to 15 percent. Mean annual precipitation is about 9 inches and mean annual temperature is about 47 degrees F.

Taxonomic class: Ashy, mesic, shallow Vitrixerandic Camborthids

Typical pedon: Jackpot sandy loam is located in an area of map unit 380. (Colors are for dry soils unless otherwise noted.)

A--0 to 4 inches; brown (10YR 5/3) sandy loam, dark brown (10YR 4/3) moist; weak fine granular structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine and few medium roots; many very fine interstitial pores; 5 percent pebbles; mildly alkaline (pH 7.8); clear wavy boundary.

Bw--4 to 11 inches; pale brown (10YR 6/3) sandy loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine, fine, and medium roots; many very fine interstitial pores; 5 percent pebbles; mildly alkaline (pH 7.8); clear wavy boundary.

Cr--11 to 20 inches; soft ashy tuff.

Type location: Elko County, Nevada; approximately 1/2 mile southeast of Cobre, about 900 feet east and 1,600 feet south of the northwest corner of section 10, T.37 N., R.67 E.; (41 degrees, 06 minutes, 27 seconds north latitude and 114 degrees, 23 minutes, 16 seconds west longitude.)

Range in characteristics:

Soil moisture: Dry from June through October, but are moist in winter and spring.

Soil temperature: 47 to 50 degrees F.

Reaction: Neutral or mildly alkaline.

Depth to bedrock: 10 to 20 inches.

Control section:

Clay content--5 to 10 percent.

Rock fragments--Up to 15 percent.

Pyroclastic material--75 to 90 percent of the 0.02 to 2 millimeter fraction and 45 to 70 percent of the fine earth fraction.

A horizon:

Value--5 or 6 dry, 3 or 4 moist.

Chroma--2 or 3.

Bw horizon:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--3 or 4.

James Canyon Series

The James Canyon series consists of very deep, poorly drained soils that formed in mixed alluvium. James Canyon soils are on flood plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Cumulic Endoaquolls

Typical pedon: James Canyon fine sandy loam, located in an area of map unit 1710. (Colors are for dry soil unless otherwise noted.)

A1--0 to 8 inches; dark gray (10YR 4/1) fine sandy loam, black (10YR 2/1) moist; moderate medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, fine and common medium roots; many very fine interstitial, common very fine and fine tubular pores; slightly effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary.

A2--8 to 23 inches; very dark gray (2.5Y 3/0) gravelly loam, black (2.5Y 2/0) moist; strong coarse prismatic structure; hard, friable, slightly sticky and slightly plastic; common very fine, fine and few medium roots; many very fine and fine tubular pores; 15 percent pebbles; moderately alkaline (pH 8.0); clear wavy boundary.

A3--23 to 25 inches; gray (10YR 5/1) gravelly silt loam, black (10YR 2/1) moist; weak thin platy structure; hard, very friable, slightly sticky and slightly plastic; common very fine, fine and few medium roots; many very fine, fine and common medium tubular pores; 15 percent pebbles; moderately alkaline (pH 8.0); abrupt wavy boundary.

A4--25 to 33 inches; dark gray (5Y 4/1) gravelly silt loam, black (2.5Y 2/1) moist; strong medium prismatic structure; hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; many very fine, fine, common medium and few coarse tubular pores; 20 percent pebbles; moderately alkaline (pH 8.0); clear wavy boundary.

C1--33 to 45 inches; light olive gray (5Y 6/2) gravelly loam with a discontinuous strata of gravelly coarse sand, dark gray (5Y 4/1) moist; massive; hard, friable, slightly sticky and slightly plastic; many very fine and fine interstitial pores; many medium distinct brownish yellow (10YR 6/6) mottles; 20 percent pebbles; moderately alkaline (pH 8.0); clear wavy boundary.

C2--45 to 60 inches; gray (5Y 5/1) fine sandy loam, very dark gray (5Y 3/1) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; many very fine

and fine interstitial pores; few fine distinct brownish yellow (10YR 6/6) mottles; many fine and medium distinct black (2.5Y 2/0) organic stains; 5 percent pebbles; moderately alkaline (pH 8.0).

Type location: Elko County, Nevada; about 9 miles southeast of the Ruby Ranger Station; approximately 1,600 feet south and 400 feet east of the northwest corner of section 34, T.32 N., R.60 E.; (40 degrees, 36 minutes, 49 seconds north latitude and 115 degrees, 11 minutes, 48 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually saturated to the surface for 1 to 2 months during late winter or early spring unless drained.

Soil temperature: 48 to 53 degrees F.

Reaction: Slightly acid to neutral, some pedons are moderately alkaline.

Mollic epipedon: 24 to 36 inches thick.

Control section:

Clay content--18 to 27 percent clay.

Rock fragments--15 to 35 percent pebbles.

A horizon:

Hue--10YR through 5Y.

Value--3 through 5 dry, 2 or 3 moist.

Chroma--0 through 2.

C horizon:

Hue--10YR through 5Y.

Value--5 or 6 dry, 3 or 4 moist,

Chroma--1 or 2.

Consistence--Slightly hard or hard dry, very friable or friable moist.

Mottles--Mottled and gleyed in the lower part in some pedons.

Texture--Clay loam, loam or silt loam, but thin strata of sandy loam, clay loam, and loamy fine sand are in some pedons.

Jericho Series

The Jericho series consists of shallow over a duripan, well drained, moderately rapidly permeable soils that formed in mixed alluvium. Jericho soils are on fan piedmonts. Slopes are 2 to 30 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 48 degrees.

Taxonomic class: Loamy-skeletal, mixed, mesic, shallow Xerollic Durorthids

Typical pedon: Jericho very gravelly loam located in an area of map unit 411. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 45 percent pebbles.

A--0 to 4 inches; light brownish gray (10YR 6/2) very gravelly loam, dark grayish brown (10YR 4/2) moist; moderate thin platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, common medium and few coarse roots; many interstitial pores; 45 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

Bw--4 to 14 inches; pale brown (10YR 6/3) very gravelly sandy loam, brown (10YR 5/3) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, medium and few coarse roots; many interstitial and few very fine tubular pores; few 2 to 5 millimeter lime coats and pendants on undersides of pebbles and cobbles; 45 percent pebbles and 5 percent cobbles; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

Bqkm--14 to 28 inches; white (10YR 8/1) indurated duripan, very pale brown (10YR 7/3) moist; strong thick platy structure; extremely hard, extremely firm, nonsticky and nonplastic; few very fine roots in fractures; 60 percent pebbles and 15 percent cobbles; violently effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

2C--28 to 60 inches; very pale brown (10YR 7/3) extremely gravelly loamy coarse sand, yellowish brown (10YR 5/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine roots; many interstitial pores; 25 percent discontinuous lime and silica cemented lenses with 2 to 5 millimeter pendants on undersides of rock fragments; 75 percent pebbles; violently effervescent; strongly alkaline (pH 9.0).

Type location: Elko County, Nevada; approximately 2 miles southeast of Little White Horse Pass; 200 feet south and 2,200 feet west of the northeast corner of section 32, T.28 N., R.69 E.; (40 degrees, 15 minutes, 38 seconds north latitude and 114 degrees, 12 minutes, 32 seconds west longitude.)

Range in characteristics:

Soil temperature: 47 to 52 degrees F. The soils are dry for 55 to 75 percent of the time that the soil temperature is above 41 degrees F.

Depth to silica cemented hardpan: 14 to 20 inches. The upper 6 or less inches are indurated and below this it is strongly cemented.

Control section:

Clay content--10 to 18 percent.

Rock fragments--35 to 60 percent.

A horizon:

Value--5 through 7 dry, 3 through 5 moist.

Chroma--2 through 4 dry or moist.

Reaction--Moderately alkaline or strongly alkaline.

Effervescence--Slightly effervescent to violently effervescent.

Bw horizon:

Value--of 5 through 7 dry, 4 or 5 moist.

Chroma--2 through 4.

Texture--It is gravelly fine sandy loam, gravelly coarse sandy loam, or very gravelly sandy loam.

Reaction--Moderately alkaline or strongly alkaline.

Effervescence--Slightly effervescent to violently effervescent.

Bqkm horizon:

Value--6 through 8 dry, 5 through 7 moist.

Chroma--1 through 4.

Jungo Series

The Jungo series consists of very deep, well drained soils that formed in mixed alluvium with a component of loess and volcanic ash. Jungo soils are on ballenas. Slopes are 4 to 50 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 52 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Xerollic Haplargids

Typical pedon: Jungo very gravelly loam located in an area of map unit 1640. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 70 percent pebbles, 5 percent cobbles, and 1 percent stones.

A--0 to 3 inches; light brownish gray (10YR 6/2) very gravelly loam, dark grayish brown (10YR 4/2) moist; moderate thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine and fine roots; many interstitial, common very fine and fine vesicular pores; 40 percent pebbles and 5 percent cobbles; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

Btk1--3 to 8 inches; pale brown (10YR 6/3) very gravelly clay loam, dark brown (10YR 4/3) moist; moderate coarse subangular blocky structure; slightly hard,

friable, sticky and plastic; many very fine, fine and common medium roots; many very fine and fine tubular pores; common thin clay films lining pores as coats and bridging sand grains; common 1 to 2 millimeter lime coats and pendants on undersides of rock fragments; 45 percent pebbles and 10 percent cobbles; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

Btk2--8 to 20 inches; pale brown (10YR 6/3) very gravelly clay loam, yellowish brown (10YR 5/4) moist; strong medium subangular blocky structure; hard, firm, sticky and plastic; common very fine, fine and few medium roots; many very fine and fine tubular pores; many thin and moderately thick clay films on faces of pedis, lining pores, and coating and bridging sand grains; many medium and coarse soft masses of lime; 1 to 2 millimeter lime coats on undersides of rock fragments; 45 percent pebbles, 5 percent cobbles, and 5 percent stones; violently effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

Btk3--20 to 60 inches; light yellowish brown (10YR 6/4) extremely gravelly clay loam, yellowish brown (10YR 5/4) moist; moderate medium subangular blocky structure; hard, firm, sticky and plastic; few very fine roots; many very fine and fine tubular pores; many thin and moderately thick clay films on faces of pedis lining pores, and coating pebbles; common fine and medium soft masses of lime; 1 to 2 millimeter lime coats on undersides of rock fragments; few fine soft masses of gypsum; 40 percent pebbles, 15 percent cobbles, and 5 percent stones; violently effervescent; strongly alkaline (pH 9.0).

Type location: Elko County, Nevada; approximately 18 miles southwest of Wendover about 600 feet north and 2,000 feet west of the southeast corner of section 3, T.30 N., R.69 E.; (40 degrees, 29 minutes, 42 seconds north latitude and 114 degrees, 10 minutes, 14 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist in winter and early spring; dry from May through October.

Soil temperature: 53 to 55 degrees F.

Depth to carbonates: 3 to 8 inches.

Control section:

Clay content--27 to 35 percent.

Rock fragments--Averages 35 to 60 percent, mainly pebbles.

A horizon:

Value--6 or 7 dry and 4 or 5 moist.

Chroma--2 or 3.

Reaction--Mildly alkaline or moderately alkaline.

Btk horizons:

Hue--10YR or 7.5YR.

Value--5 or 6 dry.

Chroma--3 or 4.

Texture--Clay loam or sandy clay loam.

Clay content--27 to 35 percent.

Rock fragments--Averages 35 to 75 percent, mainly pebbles; typically increasing with depth and including stones and cobbles in the lower subhorizons.

Structure--Weak to strong, fine to coarse subangular blocky or horizon is massive.

Consistence--Slightly hard or hard dry, friable or firm moist.

Reaction--Moderately alkaline or strongly alkaline.

Katelana Series

The Katelana series consists of very deep, well drained soils that formed in alluvium from limestone over lacustrine sediments. Katelana soils are on lake plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Fine-silty, carbonatic, mesic Typic Torriorthents

Typical pedon: Katelana silt loam located in an area of map unit 914. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; light gray (10YR 7/2) silt loam, grayish brown (10YR 5/2) moist; moderate very thick platy structure parting to moderate very fine platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; common very fine and fine vesicular pores; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

A2--2 to 5 inches; light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; moderate very thick platy structure parting to moderate very fine platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine and few fine roots; many very fine vesicular and interstitial pores; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

Cn1--5 to 9 inches; light gray (10YR 7/2) silt loam, grayish brown (10 YR 5/2) moist; moderate coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and few fine roots; many very fine tubular pores; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

Cn2--9 to 13 inches; light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; moderate coarse subangular blocky structure; slightly hard, very friable, sticky and slightly plastic; many very fine and few fine and medium roots; many very fine tubular pores; violently effervescent; strongly alkaline (pH 8.8); abrupt wavy boundary.

Cn3--13 to 28 inches; white (10YR 8/2) silt loam, light gray (10YR 7/2) moist; moderate medium prismatic structure parting to moderate medium angular blocky structure; slightly hard, very friable, sticky and slightly plastic; many very fine and few fine roots; many very fine tubular pores; violently effervescent; strongly alkaline (pH 9.0); abrupt wavy boundary.

2Ckyz1--28 to 32 inches; white (2.5Y 8/2) silty clay loam, light gray (2.5Y 7/2) moist; moderate coarse prismatic structure; slightly hard, very friable, sticky and plastic; common very fine and few fine and medium roots; common very fine tubular pores; common fine salt masses as seams and threads, few fine threads of lime and few gypsum crystals; violently effervescent; very strongly alkaline (pH 9.6); clear wavy boundary.

2Ckyz2--32 to 62 inches; white (2.5Y 8/2) silty clay loam, light gray (2.5Y 7/2) moist; common medium distinct reddish brown (5YR 5/3 and 4/4) iron mottles; moderate coarse and very coarse prismatic structure; slightly hard, very friable, sticky and plastic; common very fine and few fine roots; common very fine tubular pores; common fine salt masses as seams and threads, few fine threads of lime; common fine soft gypsum masses in horizontal bands; less than 1 percent ostracod shell fragments; violently effervescent; very strongly alkaline (pH 9.6).

Type location: Elko County, Nevada; approximately 250 feet north and 1,750 feet west of the southeast corner of section 27, T.30 N., R.62 E.; (40 degrees, 26 minutes, 38 seconds north latitude and 114 degrees, 57 minutes, 48 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in late June through October.

Soil temperature: 47 to 53 degrees F.

Depth to lake sediments: 27 to 40 inches.

Electrical conductivity: 4 to 8 millimhos per centimeter in the A and Cn horizons and 16 to 30 millimhos per centimeter below.

Control section:

Clay content--18 to 27 percent, when mixed.

Calcium carbonate equivalent--40 to 60 percent.

A horizon:

Hue--2.5Y or 10YR.

Value--7 or 8 dry, 5 through 7 moist.

Chroma--2 or 3.

Cn horizons:

Hue--2.5Y or 10YR.

Value--6 through 8 dry, 5 through 7 moist.

Chroma--2 or 3 moist or dry.

Texture--Silt loam with thin strata of loam or silty clay loam common in some pedons.

Structure--Fine through coarse subangular blocky, moderate to strong medium to very coarse prismatic in subhorizons.

Consistence--Soft or slightly hard dry, friable or very friable moist, slightly sticky or sticky and slightly plastic or plastic wet.

Reaction--Moderately alkaline or strongly alkaline.

2Ckyz horizon:

Value--6 through 8 dry, 5 through 7 moist.

Chroma--2 through 4.

Texture--Stratified silty clay loam to clay loam.

Clay content--27 to 40 percent.

Structure--Coarse or very coarse, prismatic or subangular blocky.

Consistence--Soft or slightly hard dry.

Secondary carbonates--1 to 2 percent fine lime threads within peds and on faces of peds.

Gypsum--1 to 2 percent fine gypsum crystals as segregate masses within horizon.

Salt--2 to 15 percent salt masses as seams and threads.

Other features--Some pedons have ostracod shell fragments.

Kawich Series

The Kawich series consists of deep and very deep, excessively drained soils that formed in sandy aeolian material. Kawich soils are on dunes. Slopes are 2 to 30 percent. The mean annual precipitation is about 6 inches and the mean annual temperature is about 53 degrees F.

Taxonomic class: Mixed, mesic Typic Torripsamments

Typical pedon: Kawich fine sand is located in an area of map unit 160. (Colors are for dry soils unless otherwise noted.) The soil surface is partially covered with approximately 5 percent pebbles.

A--0 to 2 inches; light gray (10YR 7/1) fine sand, brown (10YR 5/3) moist; single grain; loose; few very fine roots; many very fine interstitial pores; violently effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary.

C1--2 to 9 inches; light gray (10YR 7/2) loamy sand, brown (10YR 5/3) moist; single grain; loose, nonsticky and nonplastic; common very fine, fine, few medium and coarse roots; many very fine interstitial pores; violently effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

C2--9 to 14 inches; light gray (10YR 7/2) loamy fine sand, pale brown (10YR 6/3) moist; single grain; loose, nonsticky and nonplastic; common very fine, fine, few medium and coarse roots; many very fine interstitial pores; violently effervescent; strongly alkaline (pH 9.0); clear smooth boundary.

C3--14 to 51 inches; light gray (10YR 7/2) fine sand, pale brown (10YR 6/3) moist; single grain; loose; few very fine, fine and medium roots; many very fine interstitial pores; violently effervescent; strongly alkaline (pH 9.0); clear wavy boundary.

C5--51 to 60 inches; very pale brown (10YR 7/3) loamy fine sand, very pale brown (10YR 7/4) moist; massive; soft, very friable, nonsticky and nonplastic; violently effervescent; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; approximately 10 miles northwest of Wendover, Nevada in the Pilot Creek Valley; 2,100 feet north and 1,000 feet east of the southwest corner of section 34, T.35 N., R.69 E., (40 degrees, 52 minutes, 08 seconds north latitude and 114 degrees, 10 minutes, 00 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, but moist in some part for short periods during winter and early spring months and for 10 to 20 days cumulative between July and October due to convective storms.

Soil temperature: 54 to 59 degrees F.

Depth to unconformable lacustrine sediments: 40 to over 120 inches.

Control section:

Texture--Averages fine sand, but may contain strata of sand or loamy fine sand.

A horizon:

Hue--10YR or 7.5YR.

Value--5 through 8 dry, 4 through 7 moist.

Chroma--1 through 4.

C horizon:

Consistence--Hard to loose dry, very friable or loose moist.

Structure--Massive, single grain.

Effervescence--Slightly effervescent to violently effervescent.

Soil reaction--Mildly alkaline to very strongly alkaline.

Other features--Contains significant amounts of pyroclastic material.

Bqk2--20 to 41 inches; white (10YR 8/2) silt loam, light brownish gray (10YR 6/2) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine and coarse roots; few very fine interstitial pores; few fine soft masses of lime; violently effervescent; 25 percent discontinuous weak silica cementation; strongly alkaline (pH 8.6); gradual smooth boundary.

Bqk3--41 to 60 inches; light gray (10YR 7/2) silt loam, light brownish gray (10YR 6/2) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine interstitial pores; few fine soft masses of lime; 20 percent discontinuous weak silica cementation; violently effervescent; strongly alkaline (pH 8.6).

Kelk Series

The Kelk series consists of very deep, well drained soils that formed in mixed silty alluvium with a component of loess high in ash. Kelk soils are on inset fans and fan skirts. Slopes are 0 to 8 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is 48 degrees F.

Taxonomic class: Fine-silty, mixed, mesic Durixerollic Camborthids

Typical pedon: Kelk silt loam in an area of map unit 1831. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 5 percent pebbles.

A--0 to 2 inches; light brownish gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist; moderate thick platy structure parting to strong very fine; soft, very friable, slightly sticky and slightly plastic; few to common very fine and fine roots; common very fine interstitial pores; mildly alkaline (pH 7.6); clear smooth boundary.

Bw--2 to 12 inches; light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; strong medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, fine and few medium and coarse roots; common very fine interstitial pores; slightly effervescent; moderately alkaline (pH 8.0); clear smooth boundary.

Bqk1--12 to 20 inches; white (10YR 8/2) silt loam, light brownish gray (10YR 6/2) moist; massive; hard, firm and brittle, slightly sticky and slightly plastic; common very fine, fine and few medium and coarse roots; common very fine and few fine interstitial pores; continuous brittle matrix; few fine soft masses of lime; violently effervescent; moderately alkaline (pH 8.0); gradual smooth boundary.

Type location: Elko County, Nevada; about 1 1/2 miles northeast of Welcome; approximately 200 feet south and 1,000 feet west of the northeast corner of section 9, T.37 N., R.61 E.; (41 degrees, 06 minutes, 48 seconds north latitude and 115 degrees, 05 minutes, 03 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in the winter and spring, dry from early June through October.

Soil temperature: 47 to 52 degrees F.

Depth to base of Bw horizon: 10 to 35 inches.

Depth to brittle matrix: 12 to 35 inches.

Depth to carbonates: 12 to 35 inches.

Other features: These soils are normally slightly or moderately salt affected below 24 to 48 inches. Bk horizons are below 40 inches in some pedons.

Control section:

Clay content--18 to 27 percent.

A horizon:

Hue--10YR or 2.5Y.

Value--5 through 7 dry, 3 or 4 moist.

Chroma--2 or 3.

Reaction--Neutral to moderately alkaline.

Effervescence--Noneffervescent or slightly effervescent.

Bw horizon:

Value--6 or 7 dry, 3 through 5 moist.

Chroma--2 or 3.

Structure--Blocky or prismatic or it is massive.

Consistence--Very friable or friable, moist; slightly sticky or sticky and slightly plastic or plastic, wet.

Reaction--Neutral to moderately alkaline. It is strongly alkaline when affected by salts and sodium.

Effervescence--Noneffervescent or slightly effervescent.

Other features--There are 10 to 20 percent weak durinodes near the lower horizon boundary in some pedons.

Bqk horizons:

Value--6 through 8 dry, 3 through 6 moist.

Chroma--2 through 4.

Texture--Dominantly silt loam with thin strata of silty clay loam common in some pedons below 30 inches.

Structure--Moderate fine and medium subangular blocky or massive.

Consistence--Slightly hard to hard dry, very friable to firm and brittle, moist; slightly sticky or sticky and slightly plastic to plastic, wet.

Reaction--Neutral through strongly alkaline, increasing with depth.

Effervescence--Slightly effervescent through violently effervescent in the Bqk horizon.

Cementation--Subhorizons without continuously brittle matrix contain 30 to 90 percent durinodes or are 20 to 50 percent discontinuous weakly silica cemented.

Other features--Some pedons lack relict mottles in the lower part of the Bqk horizons. Some pedons have lenses of 5 to 15 percent pebbles in some Bqk subhorizon or extremely gravelly substrata below 42 inches. Some pedons have silty clay loam 2Bk horizons below 39 inches.

Kolda Series

The Kolda series consists of very deep very poorly drained, soils that formed in mixed alluvium over lake sediments. Kolda soils are on flood plains and lake plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Fine, montmorillonitic (calcareous), mesic Typic Endoaquolls

Typical pedon: Kolda silt loam in an area of map unit 880. (Colors are for dry soil unless otherwise noted.)

A1--0 to 4 inches; dark gray (10YR 4/1) silt loam, black (10YR 2/1) moist; weak fine subangular blocky structure parting to moderate fine granular structure; slightly hard, very friable, sticky and slightly plastic; many very fine and fine and few medium roots; common very fine tubular pores; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

A2--4 to 11 inches; dark gray (10YR 4/1) silt loam, black (10YR 2/1) moist; moderate fine subangular blocky

structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine tubular pores; strongly effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

2A3--11 to 18 inches; dark gray (10YR 4/1) silty clay, black (10YR 2/1) moist; moderate medium angular blocky structure; slightly hard, friable, sticky and plastic; few very fine roots; many very fine tubular and few fine tubular pores; strongly effervescent; strongly alkaline (pH 8.6); abrupt irregular boundary.

2Ckg1--18 to 22 inches; pale olive (5Y 6/3) silty clay, very dark gray (5Y 3/1) moist; many very fine and medium strong brown (7.5YR 4/6) iron mottles; massive; hard, friable, sticky and very plastic; few very fine roots; many very fine and fine tubular pores; common filaments and fine soft lime masses; tubular pores are lime coated; violently effervescent; strongly alkaline (pH 8.6); clear irregular boundary.

2Ckg2--22 to 31 inches; pale olive (5Y 6/3) silty clay, olive (5Y 5/3) moist; common very fine strong brown (7.5YR 4/6) iron mottles; massive; hard, friable, sticky and very plastic; few very fine roots; common very fine tubular pores; organic coats in some pores as linings; 10 percent very hard and very firm 1/8 inch lime nodules with common lime filaments; tubular pores are lime coated; strongly effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

2Ckg3--31 to 50 inches; white (2.5Y 8/0) silty clay, light gray (2.5Y 7/2) moist; common very fine strong brown (7.5YR 4/6) iron mottles; massive; hard, friable, very sticky and plastic; few very fine roots; common very fine tubular pores; organic coats in some pores as linings; 10 percent very hard and very firm 1/8 inch lime nodules; violently effervescent; strongly alkaline (pH 8.6); gradual smooth boundary.

2Ckg4--50 to 62 inches; light gray (5Y 7/2) silty clay loam, gray (5Y 6/1) moist; massive; hard, very friable, slightly sticky and slightly plastic; common very fine tubular pores; violently effervescent; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; approximately 5 1/2 miles northeast of Odgers Ranch; about 1,200 feet north and 1,000 feet west of the southeast corner of section 4, T.28 N., R.62 E.; (40 degrees, 19 minutes, 47 seconds north latitude and 114 degrees, 58 minutes, 53 seconds west longitude.)

Range in characteristics:

Soil moisture: Saturated below the soil surface due to high water table in February to July; dry in the upper part of the profile from August through September.

Soil temperature: 47 to 52 degrees F.

Mollic epipedon thickness: 10 to 23 inches.

Control section:

Clay content--Averages 35 to 50 percent.

Texture--Silt loam in the upper part, and clay or silty clay in the lower part.

Other features--Some pedons have silty clay loam in subhorizons below 40 inches.

A horizons:

Value--3 through 5 dry, 2 or 3 moist.

Chroma--1 through 3.

Reaction--Moderately alkaline to very strongly alkaline.

2Ckg horizon:

Hue--2.5Y or 5Y

Value--6 through 8 dry, 3 through 7 moist.

Chroma--0 through 3.

Structure--Moderate very fine angular blocky to medium prismatic, or is massive.

Reaction--Strongly alkaline or very strongly alkaline.

Other features--Some pedons have up to 10 percent lime nodules. Lime filaments are common in some pedons.

Krenka Series

The Krenka series consists of very deep, well drained soils that formed in mixed alluvium. Krenka soils are on fan piedmont remnants. Slopes are 4 to 30 percent. The mean annual precipitation is about 16 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Pachic Argixerolls

Typical pedon: Krenka loam, in an area of map unit 1690. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 20 percent pebbles and 5 percent cobbles.

A1--0 to 2 inches; brown (10YR 5/3) loam, black (10YR 2/1) moist; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; few very fine, fine and medium roots; few very fine, fine and medium interstitial pores; 10 percent pebbles; neutral (pH 6.6); clear wavy boundary.

A2--2 to 17 inches; brown (10YR 5/3) loam, black (10YR 2/1) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common fine and medium roots; common very fine, medium and few coarse interstitial and tubular

pores; 10 percent pebbles; neutral (pH 6.6); gradual smooth boundary.

Bt1--17 to 22 inches; brown (10YR 5/3) gravelly sandy clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many fine and medium roots; few thin clay films on faces of peds and lining pores; many very fine and medium interstitial and tubular pores; 25 percent pebbles; neutral (pH 6.6); clear smooth boundary.

Bt2--22 to 31 inches; grayish brown (10YR 5/2) gravelly sandy clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, fine and common medium pores; common moderately thick clay films on faces of peds and lining pores; 30 percent pebbles; neutral (pH 6.6); clear smooth boundary.

2Bt3--31 to 60 inches; yellowish brown (10YR 5/4) extremely cobbly sandy clay loam, dark yellowish brown (10YR 3/4) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine and medium roots; many very fine and common fine interstitial and tubular pores; common thin clay films on faces of peds and lining pores; 40 percent pebbles, 20 percent cobbles, and 10 percent stones; slightly acid (pH 6.4).

Type location: Elko County, Nevada; about 18.25 miles east of Halleck; approximately 1,500 feet south and 2,000 feet west of the northeast corner of section 3, T.34 N., R.60 E.; (40 degrees, 51 minutes, 38 seconds north latitude and 115 degrees, 11 minutes, 09 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually moist, moist in winter and spring, dry in late summer and fall.

Soil temperature: 44 to 47 degrees F.

Mollic epipedon thickness: 20 to 35 inches.

Depth to argillic: 15 to 20 inches.

Depth to base of argillic: 45 to more than 60 inches.

Control section:

Clay content--20 to 25 percent clay.

Rock fragments--Averages 35 to 50 percent.

A horizon:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--2 or 3 dry, 1 or 2 moist.

Bt1 and Bt2 horizons:

Chroma--2 or 3.

Texture--Sandy clay loam.
 Clay content--20 to 25 percent.
 Rock fragments--25 to 40 pebbles, 0 to 5 percent cobbles.
 Consistence--Soft or slightly hard.

2Bt3 horizons:

Value--5 through 8 dry, 3 through 5 moist.
 Texture--Very cobbly or extremely cobbly sandy clay loam.
 Clay content--20 to 25 percent.
 Rock fragments--35 to 40 percent pebbles, 10 to 20 percent cobbles, 0 to 10 percent stones.
 Consistence--Soft or slightly hard.
 Reaction--Slightly acid or neutral.

Kunzler Series

The Kunzler series consists of very deep, well drained, moderately slowly permeable soils that formed in alluvium from limestone. Kunzler soils are on beach plains and fan skirts. Slopes are 0 to 4 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 50 degrees F.

Taxonomic class: Coarse-loamy, mixed, mesic Durixerollic Calciorthids

Typical pedon: Kunzler loam located in an area of map unit 540. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 5 percent pebbles.

A1--0 to 3 inches; pale brown (10YR 6/3) loam, dark brown (10YR 4/3) moist; moderate very thick platy structure parting to weak very thin platy structure; soft, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine vesicular pores; 5 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

A2--3 to 16 inches; very pale brown (10YR 7/3) loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and few fine, medium and coarse roots; common very fine interstitial and tubular pores; 5 percent pebbles; strongly effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

Bqk1--16 to 25 inches; very pale brown (10YR 7/3) loam, light yellowish brown (10YR 6/4) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and few fine, medium roots;

few very fine tubular pores; 20 percent hard and firm durinodes; 5 percent pebbles; thin lime and silica coats on undersides of pebbles; strongly effervescent; very strongly alkaline (pH 9.4); clear smooth boundary.
 Bqk2--25 to 48 inches; very pale brown (10YR 7/3) fine sandy loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, very friable, nonsticky and slightly plastic; few very fine roots; 15 percent discontinuous silica and lime cementation; 10 percent pebbles; thick lime and silica coats on undersides of pebbles; strongly effervescent; very strongly alkaline (pH 9.4); clear smooth boundary.
 Bqk3--48 to 60 inches; very pale brown (10YR 7/3) loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, very friable, nonsticky and slightly plastic; 10 percent pebbles; thin lime and silica coats on undersides of pebbles; strongly effervescent; very strongly alkaline (pH 9.4); clear smooth boundary.

Type location: Elko County, Nevada; approximately 28 miles southeast of Wells; located about 1,200 feet north and 1,900 feet east of the southwest corner of section 17, T.33 N., R.64 E.; (40 degrees, 44 minutes, 05 seconds north latitude and 114 degrees, 46 minutes, 08 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, but is moist in some part 25 to 35 percent of the time.

Soil temperature: 50 to 53 degrees F. It is dry in all parts for 45 to 60 consecutive days following the summer solstice.

Depth to the calcic horizon: 10 to 35 inches.

Control section:

Clay content--10 to 18 percent clay.

A horizon:

Value--5 through 7 dry and 3 through 5 moist.

Chroma--2 through 4, dry or moist.

Effervescence--Slightly effervescent to strongly effervescent.

Reaction--Moderately alkaline or strongly alkaline.

Bqk horizon:

Hue--7.5YR or 10YR.

Value--6 through 8 dry and 4 through 6 moist.

Chroma--2 through 4.

Texture--Loam, fine sandy loam, or sandy loam.

Rock fragments--0 to 15 percent pebbles.

Cementation--Bqk contains 20 percent or more durinodes in some part of the horizon above 40 inches. About half of the durinodes are strongly cemented.

Exchangeable sodium percentage--Increases with depth and is greater than 40 percent in some part of the horizon.

Reaction--Moderately alkaline to very strongly alkaline.

Structure--Subangular blocky, platy or massive.

Consistence--Soft to slightly hard, very friable to firm, nonsticky to slightly sticky and nonplastic to slightly plastic.

Other features--Some pedons have more than 15 percent coarse fragments occur below 40 inches. Some pedons may be continuously weakly cemented in the B horizon.

Kyler Series

The Kyler series consists of shallow and very shallow, well drained soils formed in residuum from limestone. Kyler soils are on hills, mountains, and rock pediment remnants. Slopes are 4 to 50 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 53 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, mesic
Lithic Xeric Torriorthents

Typical pedon: Kyler very gravelly loam in an area of map unit 1540. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 40 percent pebbles and 5 percent cobbles.

A--0 to 3 inches; light gray (10YR 7/2) very gravelly loam, dark grayish brown (10YR 4/2) moist; moderate medium granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine and fine interstitial pores; 40 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.

Bk--3 to 7 inches; pale brown (10YR 6/3) very gravelly loam, dark brown (10YR 4/3) moist; strong medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few medium and many very fine and fine roots; many very fine interstitial, and many very fine and few medium tubular pores; few 2 to 5 millimeter thick lime pendants on undersides of rock fragments; 50 percent pebbles and 5 percent cobbles; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.

R--7 inches; limestone; many very fine and fine roots matted on bedrock surface.

Type location: Elko County, Nevada; approximately 32 miles southwest of Wendover in the Ferber Hills; 1,000

feet south and 1,200 feet west of the northeast corner of section 30, T.28 N., R.70 E.; (40 degrees, 16 minutes, 24 seconds north latitude and 114 degrees, 06 minutes, 40 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring months, dry in summer and fall except for 10 to 20 days cumulative between July and October due to convection storms.

Soil temperature: 53 to 59 degrees F.

Depth to bedrock: 6 to 14 inches.

Reaction: Moderately alkaline or strongly alkaline.

Effervescence: Strongly effervescent to violently effervescent.

Carbonates: 40 to 60 percent calcium carbonate equivalent.

Control section:

Clay content--7 to 18 percent.

Rock fragments--35 to 60 percent.

A horizon:

Value--6 or 7 dry, 3 through 5 moist.

Chroma--2 or 3.

Bk horizon:

Hue--10YR or 7.5YR.

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 through 4 moist.

Texture (less than 2 millimeter fraction)--Loam, including strata of fine sandy loam, very fine sandy loam or silt loam.

Structure--Massive or subangular blocky.

Consistence--Soft or slightly hard dry, slightly sticky or sticky, slightly plastic or plastic.

Rock fragments--Average 35 to 60 percent.

Subhorizons have up to 70 percent rock fragments in some pedons.

Other features--Some pedons have thin lime coats on rock fragments.

Kzin Series

The Kzin series consists of very shallow and shallow, well drained soils that formed in residuum from clastic sedimentary rocks. Kzin soils are on hills and rock pediment remnants. Slopes are 8 to 50 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 45 degrees F.

Taxonomic class: Loamy-skeletal, mixed (calcareous), mesic, shallow Xeric Torriorthents

Typical pedon: Kzin very gravelly loam, 8 to 30 percent slopes, is located in an area of map unit 330. (Colors are for dry soils unless otherwise noted.) The soil surface is partially covered with approximately 80 percent pebbles.

A--0 to 3 inches; light brownish gray (10YR 6/2) very gravelly loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, very friable, nonsticky and slightly plastic; common very fine roots; many very fine and fine interstitial pores; thin lime coats and 1 millimeter thick lime pendants on pebbles; 40 percent pebbles; strongly effervescent; moderately alkaline (pH 7.9); abrupt wavy boundary.

Bk--3 to 9 inches; pale brown (10YR 6/3) very gravelly loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine, and few medium roots; common very fine interstitial pores; few thin lime coats and 1 to 3 millimeter thick lime pendants on pebbles; 40 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

Cr--9 to 20 inches; soft, tuffaceous, fractured puddingstone conglomerate with about 60 percent pebbles in matrix; few very fine and fine roots and some lime coats in fractures.

Type location: Elko County, Nevada; approximately 2.5 miles south of Moor Summit in an unsectionized area, about 1,900 feet south and 200 feet west of the projected northeast corner of section 22, T.37 N., R.63 E.; (41 degrees, 04 minutes, 38 seconds north latitude and 114 degrees, 49 minutes, 57 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry mid-June through late October.

Soil temperature: 47 to 52 degrees F.

Depth to paralithic contact: 4 to 12 inches.

Control section:

Clay content--15 to 25 percent.

Rock fragments--35 to 50 percent, mainly pebbles.

Reaction--Moderately alkaline or strongly alkaline.

Calcium carbonate equivalent--15 to 30 percent.

Other features--Eroded phases are recognized.

A horizon:

Value--5 or 6 dry, 3 or 4 moist.

Chroma--2 or 3.

Bk horizon:

Value--5 through 7 dry, 4 or 5 moist.

Chroma--2 or 3.

Structure--Subangular blocky or is massive.

Texture--Loam or sandy loam.

Consistence--Slightly sticky or nonsticky and nonplastic or slightly plastic wet.

Linoyer Series

The Linoyer series consists of very deep, well drained, moderately permeable soils that formed in mixed alluvium and lacustrine sediments. Linoyer soils are on inset fans, fan skirts, and alluvial flats. Slopes are 0 to 4 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 49 degrees F.

Taxonomic class: Coarse-silty, mixed (calcareous), mesic Xeric Torriorthents

Typical pedon: Linoyer silt loam located in an area of map unit 101. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; pale brown (10YR 6/3) silt loam, dark brown (10YR 4/3) moist; strong thick platy parting to strong thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine and few medium roots; common very fine vesicular and interstitial pores; strongly effervescent; moderately alkaline (pH 8.3); abrupt smooth boundary.

A2--3 to 9 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 5/3) moist; moderate fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine and common medium roots; common very fine, fine interstitial, and tubular pores; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

C1--9 to 24 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 5/3) moist; massive; soft, very friable, slightly sticky and slightly plastic; many very fine, fine and common medium roots; common very fine, fine interstitial, and tubular pores; 1/4 to 1 inch thick discontinuous horizontal lenses of finally stratified lake sediments; violently effervescent; strongly alkaline (pH 8.5); clear smooth boundary.

C2--24 to 33 inches; pale brown (10YR 6/3) very fine sandy loam, dark yellowish brown (10YR 4/4) moist; massive; soft, very friable, slightly sticky and slightly plastic; common very fine and few fine roots; common

very fine and fine interstitial pores; few fine soft masses of lime; few 2 to 3 inch diameter pockets of volcanic ash; strongly effervescent; moderately alkaline (pH 8.3); clear smooth boundary.

C3--33 to 40 inches; light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common fine interstitial pores; strongly effervescent; moderately alkaline (pH 8.1); clear wavy boundary.

C4--40 to 60 inches; light yellowish brown (10YR 6/4) very fine sandy loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; common fine interstitial and tubular pores; strongly effervescent; moderately alkaline (pH 8.2).

Type location: Elko County, Nevada; approximately 30 miles southwest of Wendover; located about 800 feet south and 1,200 feet west of the northeast corner of section 33, T.29 N., R.68 E.; (40 degrees, 20 minutes, 46 seconds north latitude and 114 degrees, 17 minutes, 58 seconds west longitude.)

Range in characteristics:

Soil moisture: Continually moist for 60 to 70 days out of the 120 days after the winter solstice and are dry for 70 to 80 consecutive days in the 3 months after June 21.

Soil temperature: 47 to 54 degrees F.

A horizon:

Hue--10YR or 7.5YR.

Value--5 to 7 dry, 4 to 6 moist.

Chroma--2 to 4.

Reaction--Moderately alkaline to strongly alkaline.

C horizon:

Hue--10YR, 7.5YR, or 5YR.

Value--6 or 7 dry, 4 to 6 moist.

Chroma--3 to 6.

Reaction--Moderately alkaline to strongly alkaline.

Texture--Very fine sandy loam or silt loam which contains 5 to 15 percent sand coarser than very fine sand.

Calcium carbonate equivalent--10 to 40 percent.

Structure--Massive or platy.

Consistence--Soft or slightly hard, very friable to friable and slightly plastic to plastic.

Logan Series

The Logan series consists of very deep, poorly drained, slowly permeable soils that formed in mixed alluvium and reworked lacustrine sediments. Logan soils are on flood plains and channels. Slopes are 0 to 2 percent. The mean annual precipitation is about 15 inches, and the mean annual temperature is about 48 degrees F.

Taxonomic class: Fine-silty, mesic Typic Calciaquolls

Typical pedon: Logan silt loam located in an area of map unit 1660. (Colors are for dry soil unless otherwise noted.)

A1--0 to 5 inches; very dark gray (10YR 3/1) silt loam, black (10YR 2/1) moist; moderate medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, fine and common medium roots; many very fine tubular pores; common ostracod shell fragments throughout profile; slightly effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary.

A2--5 to 10 inches; dark gray (10YR 4/1) silt loam, black (10YR 2/1) moist; moderate thin platy structure; slightly hard, very friable, sticky and slightly plastic; many very fine, fine and common medium roots; many very fine, fine and few medium tubular pores; violently effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

Bkg1--10 to 18 inches; light gray (5Y 7/1) silty clay loam, light gray (5Y 6/1) moist; weak medium prismatic structure parting to strong fine angular blocky; slightly hard, friable, sticky and plastic; common very fine, fine and medium roots; many very fine, fine and few medium tubular pores; common dark gray (10YR 4/1) organic stains on faces of peds and lining pores; common fine and medium vertical nodules of lime; violently effervescent; strongly alkaline (pH 8.8); clear wavy boundary.

Bkg2--18 to 40 inches; light gray (5Y 7/1) silty clay loam, light gray (5Y 6/1) moist; moderate medium prismatic structure parting to strong fine angular blocky; hard, friable, sticky and plastic; common very fine, fine and medium roots; many very fine, fine and few medium tubular pores; dark gray (2.5Y 4/1) organic stains on faces of peds and lining pores; common fine and medium vertical soft masses of lime; violently effervescent; strongly alkaline (pH 9.0); clear wavy boundary.

Cg--40 to 60 inches; light gray (5Y 7/1) silty clay loam, light gray (5Y 6/1) moist; strong coarse prismatic structure

parting to strong medium angular blocky; hard, firm, sticky and plastic; common very fine, fine and medium roots; many very fine, fine and few medium tubular pores; few fine filaments of lime; violently effervescent; strongly alkaline (pH 9.0).

Type location: Elko County, Nevada; approximately 12 miles northwest of Odgers Ranch in Ruby Valley; 1,000 feet north and 1,800 feet west of the southeast corner of section 7, T.30 N., R.60 E.; (40 degrees, 29 minutes, 26 seconds north latitude and 115 degrees, 14 minutes, 48 seconds west longitude.)

Range in characteristics:

Soil moisture: Saturated from the soil surface to 30 inches. Shallow water table phases have the water table within 18 inches of the surface for most of the year.

Soil temperature: 47 to 52 degrees F.

Calcium carbonate equivalent: 15 to 40 percent in the particle-size control section.

Electrical conductivity: 0 to 4 throughout.

Mollic epipedon thickness: 10 to 25 inches.

Depth to calcic horizon: 10 to 25 inches.

Reaction: Moderately alkaline or strongly alkaline.

A horizon:

Hue--10YR or 2.5Y.

Value--3 or 4 dry, 2 or 3 moist.

Chroma--1 or 2.

Organic matter content--6 to 10 percent but ranges from 4 to 20 percent.

Calcium carbonate equivalent--3 to 25 percent.

Bkg horizon:

Hue--2.5Y, 5Y, 5GY or neutral.

Value--5 to 8 dry, 4 to 7 moist.

Chroma--1 or less.

Clay content--27 to 35 percent.

Structure--Lacking to weak subangular blocky or is prismatic and is weakly cemented in places.

Calcium carbonate equivalent--15 to 60 percent.

Cg horizon:

Hue--2.5Y, 5Y or neutral.

Value--5 to 8 dry, 4 to 7 moist.

Chroma--Less than 2 where the soil is not mottled.

Lomoiné Series

The Lomoiné series consists of shallow and very shallow, well drained soils that formed in residuum and colluvium

from granitic rocks. Lomoiné soils are on hills. Slopes are 8 to 50 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 53 degrees F.

Taxonomic class: Loamy-skeletal, mixed (calcareous), mesic Lithic Xeric Torriothents

Typical pedon: Lomoiné gravelly sandy loam located in an area of map unit 440. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with approximately 15 percent pebbles.

A1--0 to 3 inches; light brownish gray (10YR 6/2) gravelly sandy loam, dark grayish brown (10YR 4/2) moist; moderate thick platy structure parting to moderate medium subangular blocky; slightly hard, very friable, nonsticky and nonplastic; few very fine roots; many very fine and few fine vesicular and few very fine tubular pores; 25 percent pebbles; slightly effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary.

A2--3 to 9 inches; pale brown (10YR 6/3) very gravelly sandy loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and nonplastic; common very fine, fine and medium roots; common very fine interstitial pores; few thin lime coats on pebbles; 40 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

C--9 to 11 inches; very pale brown (10YR 7/3) very gravelly sandy loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; few very fine roots; few very fine interstitial pores; few thin lime coats on pebbles; 40 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary.

R--11 inches; slightly weathered granitic bedrock.

Type location: Elko County, Nevada; approximately 1 1/2 miles east of Silver Zone Pass; 2,050 feet north and 2,000 feet west of the southeast corner of section 16, T.35 N., R.68 E.; (40 degrees, 54 minutes, 43 seconds north latitude and 114 degrees, 17 minutes, 29 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist in winter and spring months, dry in summer and fall except for 10 to 20 days cumulative between July and October due to convection storms.

Soil temperature: 53 to 59 degrees F.

Depth to bedrock: 4 to 14 inches.

Carbonates: Calcareous, usually slightly effervescent to strongly effervescent in all parts.

Calcium carbonate equivalent: Less than 5 percent.

Control section:

Clay content--8 to 15 percent.

Rock fragments--35 to 60 percent with a high percentage of 2 to 5 millimeter pebbles.

Reaction--Mildly alkaline to moderately alkaline.

A horizon:

Value--5 or 6 dry, 3 or 4 moist.

Chroma--2 or 3.

C horizon:

Value--5 through 7 dry, 3 or 4 moist.

Chroma--2 through 4.

Texture--Coarse sandy loam or sandy loam.

Structure--Massive or subangular blocky.

Rock fragments--35 to 60 percent rock fragments with numerous fine (less than 5 millimeters) pebbles.

Other features--Some pedons have thin lime coats on pebbles.

Loray Series

The Loray series consists of very deep, somewhat excessively drained soils that formed in mixed alluvium with a component of loess. Loray soils are on beach plains and fan skirts. Slopes are 0 to 15 percent. The mean annual precipitation is about 6 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Sandy-skeletal, mixed, mesic Typic Calciorthids

Typical pedon: Loray gravelly sandy loam, located in an area of map unit 116. (Colors are for dry soils unless otherwise noted.) The soil surface is partially covered with approximately 40 percent fine gravels.

A--0 to 4 inches; light gray (10YR 7/2) gravelly sandy loam, brown (10YR 5/3) moist; moderate thick platy structure; slightly hard, very friable, nonsticky and nonplastic; common very fine, few fine and medium roots; many very fine vesicular pores; few thin lime pendants on the undersides of pebbles; 15 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); clear wavy boundary.

Bk--4 to 12 inches; light gray (10YR 7/2) gravelly sandy loam, brown (10YR 5/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine, fine and medium roots; many very fine interstitial pores;

common thin lime pendants on the undersides of pebbles; 30 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

2Bk2--12 to 20 inches; pale brown (10YR 6/3) extremely gravelly loamy coarse sand, brown (10YR 4/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine, fine and medium roots; many very fine interstitial pores; common thin lime pendants on the undersides of rock fragments; 60 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

2Bk3--20 to 34 inches; pale brown (10YR 6/3) extremely gravelly loamy coarse sand, brown (10YR 4/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine, fine and medium roots; many very fine interstitial pores; common thin lime pendants on the undersides of rock fragments; 65 percent pebbles; violently effervescent; strongly alkaline (pH 8.8); clear wavy boundary.

2Bk4--34 to 47 inches; pale brown (10YR 6/3) extremely gravelly loamy coarse sand, brown (10YR 4/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; many very fine interstitial pores; 20 percent discontinuous weak lime cementation; common thin lime pendants on the undersides of rock fragments; 55 percent pebbles and 15 percent cobbles; violently effervescent; strongly alkaline (pH 8.8); abrupt wavy boundary.

2Ck--47 to 60 inches; pale brown (10YR 6/3) stratified extremely gravelly loamy coarse sand and loamy fine sand, brown (10YR 4/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few thin lime pendants on the undersides of rock fragments; 60 percent pebbles; violently effervescent; strongly alkaline (pH 9.0).

Type location: Elko County, Nevada; approximately 14 miles northwest of Wendover; about 3,000 feet south and 200 feet east of the northwest corner of section 17, T.35 N., R.69 E.; (40 degrees, 54 minutes, 45 seconds north latitude and 114 degrees, 12 minutes, 27 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist in winter and spring, dry late May through early November.

Soil temperature: 53 to 59 degrees F.

Depth to calcic horizon: 4 to 18 inches.

Reaction: Moderately alkaline to strongly alkaline

Calcium carbonate equivalent: 5 to 20 percent.

Soft powdery lime: 5 to 20 percent lime filaments and masses.

Control section:

Clay content--Averages 0 to 8 percent.

Rock fragments--Averages 60 to 80 percent mainly pebbles with 0 to 10 percent cobbles.

A horizon:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 3.

Bk horizon:

Value--6 through 8 dry, 4 through 6 moist.

Texture--Loamy fine sand, sandy loam, fine sandy loam or loam.

Clay content--5 to 20 percent.

Rock fragments--5 to 35 percent, mainly pebbles.

2Bk horizons:

Value--6 through 8 dry, 4 through 6 moist.

Chroma--2 or 3.

Textures--Stratified loamy fine sand to coarse sand.

Clay content--0 to 8 percent.

Rock fragments--60 to 80 percent, mainly pebbles.

Structure--Massive or single grain.

Lime cementation--Up to 20 percent weak or strong discontinuous lime cementation is common in any subhorizon.

2Ck horizon:

Value--6 through 8 dry, 4 through 6 moist.

Chroma--2 or 3.

Structure--Massive or single grain.

Consistence--Slightly hard or loose.

Other features--5 to 10 percent CaCO₃.

Luning Series

The Luning series consists of very deep, somewhat excessively drained soils that formed in mixed alluvium. Luning soils are on beach plains. Slopes are 2 to 8 percent. The mean annual precipitation is about 4 inches and the mean annual temperature is about 54 degrees F.

Taxonomic class: Sandy, mixed, mesic Typic Torriorthents

Typical pedon: Luning gravelly loamy sand located in an area of map unit 1590. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 10 percent pebbles.

A--0 to 3 inches; light brownish gray (10YR 6/2) gravelly loamy sand, grayish brown (10YR 5/2) moist; weak

thick platy structure; soft, very friable, nonsticky and nonplastic; few very fine roots; few very fine interstitial pores; 15 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

C1--3 to 20 inches; light gray (10YR 7/2) loamy sand, brown (10YR 5/3) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine, fine and few medium and coarse roots; few very fine interstitial pores; few thin lime coats on pebbles; 5 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); gradual smooth boundary.

C2--20 to 30 inches; light gray (10YR 7/2) loamy sand, brown (10YR 5/3) moist; massive; soft, very friable, nonsticky and nonplastic, common very fine, fine and few medium and coarse roots; few very fine interstitial pores; few thin lime coats on pebbles; 10 percent pebbles; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary.

C3--30 to 39 inches; light gray (10YR 7/2) gravelly coarse sand, brown (10YR 5/3) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine and medium roots; common very fine interstitial pores; few thin lime coats on pebbles; 25 percent pebbles; violently effervescent; strongly alkaline (pH 9.0); clear smooth boundary.

C4--39 to 60 inches; light gray (10YR 7/2) very gravelly coarse sand, brown (10YR 5/3) moist; single grain; loose, nonsticky and nonplastic; common very fine, few fine, and medium roots; common very fine interstitial pores; few thin lime coats on pebbles; 45 percent pebbles; violently effervescent; strongly alkaline (pH 8.8).

Type location: Elko County, Nevada; approximately 8 miles southwest of Wendover, Nevada; about 1,200 feet north and 1,200 feet east of the southwest corner of section 14, T.32 N., R.69 E.; (40 degrees, 38 minutes, 34 seconds north latitude and 114 degrees, 08 minutes, 47 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in some part for short periods during winter and spring and for 10 to 20 days cumulative between July and October due to convection storms. Dry in lower moisture control section.

Soil temperature: 53 to 59 degrees F.

Reaction: Mildly alkaline to strongly alkaline.

Control section:

Clay content--2 to 8 percent.

Rock fragments--10 to 30 (dominantly 2 to 5 millimeters) strata containing greater than 35 percent rock fragments.

Other features--Thin strata (1/2 to 2 inches) of sandy loam in some pedons, but are discontinuous and/or thin.

Carbonates--Noneffervescent to violently effervescent.

A horizon:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 3.

C horizon:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 3.

Texture--Loamy sand, sand, or coarse sand with thin strata of sandy loam. Averages loamy sand or sand.

Carbonates--Slightly effervescent to violently effervescent.

Structure--Massive, subangular blocky or is single grain.

Consistence--Loose or soft to slightly hard dry, loose or very friable to friable, nonsticky to slightly sticky and nonplastic to slightly plastic.

Lykal Series

The Lykal series consists of very deep, somewhat poorly drained soils that formed in mixed alluvium. Lykal soils are on stream terraces. Slopes are 0 to 4 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 50 degrees F.

Taxonomic class: Coarse-silty, carbonatic, mesic Aeric Fluvaquents

Typical pedon: Lykal silt loam, in an area of map unit 1760. (Colors are for dry soil unless otherwise noted.)

A1--0 to 5 inches; light brownish gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist; weak medium platy structure parting to fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine, common fine, medium and few coarse roots; many very fine interstitial pores; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

A2--5 to 12 inches; light brownish gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist; weak very thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine, few fine, medium and coarse roots; many very fine interstitial pores; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

C1--12 to 18 inches; light brownish gray (10YR 6/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; slightly

hard, very friable, slightly sticky and slightly plastic; common very fine, few fine, medium and coarse roots; many very fine, few fine and medium interstitial and tubular pores; violently effervescent; strongly alkaline (pH 8.6); gradual smooth boundary.

C2--18 to 41 inches; light gray (10YR 7/2) silt loam, grayish brown (10YR 5/2) moist; weak coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine, fine and medium roots; many very fine, few fine, medium and coarse interstitial and tubular pores; few medium distinct yellowish brown (10YR 5/6) iron mottles; violently effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

Ab1--41 to 46 inches; dark grayish brown (2.5Y 4/2) silt loam, very dark grayish brown (2.5Y 3/2) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; common very fine, few fine, medium and coarse tubular pores; few fine distinct yellowish brown (10YR 5/6) iron mottles; 5 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

Ab2--46 to 51 inches; grayish brown (2.5Y 5/2) loam, dark grayish brown (2.5Y 4/2) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine, few fine, medium and coarse tubular pores; 5 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

2C1--51 to 58 inches; white (2.5Y 8/2) gravelly clay loam, light gray (2.5Y 7/2) moist; massive; slightly hard, friable, sticky and plastic; few very fine, fine and medium interstitial and tubular pores; common fine distinct reddish yellow (7.5YR 6/6) iron mottles; 25 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

2C2--58 to 60 inches; white (10YR 8/1) gravelly sandy loam, pale brown (10YR 6/3) moist; massive; hard, friable, slightly sticky and nonplastic; common very fine and fine interstitial and few fine tubular pores; common fine distinct reddish yellow (7.5YR 6/6) iron mottles; 25 percent pebbles; violently effervescent; moderately alkaline (pH 8.4).

Type location: Elko County, Nevada; about 6 miles south of the Ruby Valley Forest Service Station; approximately 1,100 feet north and 3,200 feet west of the southeast corner of section 18, T.32 N., R.60 E.; (40 degrees, 39 minutes, 00 seconds north latitude and 115 degrees, 14 minutes, 51 seconds west longitude.)

Range in characteristics:

Soil moisture: Saturated and aquic conditions below at depths of 18 to 36 inches in mid spring, and then drops to below 60 inches in summer.

Soil temperature: 47 to 52 degrees F.

Depth to redoximorphic concentrations: 15 to 20 inches.

Control section:

Clay content--12 to 18 percent.

A horizon:

Calcium carbonate equivalent--40 to 50 percent.

C horizons:

Value--6 or 7 dry, 3 through 6 moist. Some subhorizon within 30 inches of the surface has value of 5 or less moist.

Structure--Medium or coarse subangular blocky.

Reaction--Moderately alkaline or strongly alkaline.

Other features--60 to 70 percent calcium carbonate equivalent.

Ab horizons:

Value--4 or 5 dry, 3 or 4 moist.

Reaction--Mildly alkaline or moderately alkaline.

Texture--Silt loam or loam.

Clay content--12 to 18 percent.

Effervescence--Strongly effervescent or violently effervescent.

2C horizons:

Hue--2.5Y or 10YR.

Value--6 or 7 moist.

Chroma--1 or 2 dry, 2 or 3 moist.

Reaction--Mildly alkaline or moderately alkaline.

Texture--Stratified gravelly clay loam to gravelly sandy loam.

Clay content--Averages 20 to 27 percent.

Rock fragments--20 to 30 percent pebbles.

Other features--Strongly effervescent or violently effervescent.

Calcium carbonates equivalent--30 to 40 percent.

Mazuma Series

The Mazuma series consists of very deep, well drained soils that formed in mixed alluvium and lacustrine sediments. Mazuma soils are on lagoons, beach plains, lake plains, and fan skirts. Slopes are 0 to 4 percent. The mean annual precipitation is about 6 inches and the mean annual temperature is about 50 degrees F.

Taxonomic class: Coarse-loamy, mixed (calcareous), mesic Typic Torriorthents

Typical pedon: Mazuma silt loam in an area of map unit 800. (Colors are for dry soil unless otherwise noted.)

A1--0 to 5 inches; light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; strong very coarse platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few fine roots; many very fine and fine vesicular pores; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary.

A2--5 to 15 inches; very pale brown (10YR 7/3) silt loam, yellowish brown (10YR 5/4) moist; strong fine platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; few very fine vesicular pores; violently effervescent; moderately alkaline (pH 8.2); gradual smooth boundary.

Bk--15 to 24 inches; light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; strong fine platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few fine roots; few very fine vesicular pores; few fine filaments of lime; violently effervescent; strongly alkaline (pH 8.6); gradual smooth boundary.

C1--24 to 32 inches; light gray (10YR 7/2) sandy loam, brown (10YR 5/3) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine roots; few very fine vesicular pores; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

C2--32 to 60 inches; light gray (10YR 7/2) fine sandy loam, light brownish gray (10YR 6/2) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine roots; violently effervescent; moderately alkaline (pH 8.0).

Type location: Elko County, Nevada; approximately 2 miles north of Currie, Nevada; located in an unsectionized area 1,600 feet south and 1,200 feet east of the northeast corner of section 24, T.29 N., R.64 E.; (40 degrees, 22 minutes, 47 seconds north latitude and 114 degrees, 41 minutes, 21 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist for short periods in winter and spring, dry from summer to mid-fall.

Soil temperature: 53 to 57 degrees F.

Electrical conductivity: Greater than 2 millimhos.

Exchangeable sodium percent: 13 to 45.

Control section:

Clay content--5 to 15 percent.

Rock fragments--A few strata have up to 25 percent pebbles.

A horizons:

Hue--10YR or 2.5Y.

Value--5 through 7 dry; 4 through 6 moist.

Chroma--2 through 4.

Reaction--Moderately alkaline to very strongly alkaline.

Bk horizons:

Hue--10YR or 2.5Y.

Value--5 through 7 dry; 4 through 6 moist.

Chroma--2 through 4.

Structure--Subangular blocky, platy or massive.

Other features--Less than 3 percent calcium carbonate equivalent.

Consistence--Slightly hard or hard, dry.

C horizons:

Hue--10YR or 2.5Y

Value--5 through 7 dry; 4 through 6 moist.

Chroma--2 through 4.

Texture--Stratified sandy loam, fine sandy loam, very fine sandy loam and silt loam with some pedons containing thin strata of clay loam and strata up to 12 inches thick of coarse sand, very coarse sand, fine sand or loamy sand.

Reaction--Moderately alkaline to very strongly alkaline.

Segregated lime--Few fine or medium calcium carbonate concretions may be in any horizon.

Unconformable material--Lacustrine silts and clays occur below 40 inches in some pedons.

Other features--Salt crystals and relict mottles are in some pedons in the lower C horizon.

Structure--Subangular blocky, platy or is single grain or massive.

Consistence--Soft or slightly hard, dry or is loose.

Mclvey Series

The Mclvey series consists of very deep, well drained soils that formed in colluvium from granite. Mclvey soils are on fan piedmont remnants, hills, and mountains. Slopes are 2 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Typic Argixerolls

Typical pedon: Mclvey very cobbly loam in an area of map unit 1770. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 20 percent pebbles and 15 percent cobbles.

A1--0 to 2 inches; grayish brown (10YR 5/2) very cobbly loam, very dark grayish brown (10YR 3/2) moist;

moderate thick platy structure parting to strong very thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine, few fine, medium and coarse roots; common very fine interstitial pores; 20 percent pebbles and 15 percent cobbles; neutral (pH 6.6); clear smooth boundary.

A2--2 to 7 inches; brown (10YR 5/3) very cobbly loam, dark brown (10YR 3/3) moist; moderate coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine to coarse roots; few very fine interstitial and tubular pores; 25 percent pebbles and 20 percent cobbles; slightly acid (pH 6.4); clear smooth boundary.

AB--7 to 12 inches; brown (10YR 5/3) very gravelly loam, dark brown (10YR 3/3) moist; strong medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine to coarse roots; common very fine and fine interstitial and tubular pores; 30 percent pebbles and 5 percent cobbles; neutral (pH 6.8); clear smooth boundary.

2Bt1--12 to 18 inches; yellowish brown (10YR 5/4) very gravelly clay loam, dark yellowish brown (10YR 4/4) moist; strong medium coarse subangular blocky structure; hard, friable, sticky and plastic; few very fine and fine roots; many very fine and few fine interstitial and tubular pores; many moderately thick clay films on faces of peds and lining pores; 30 percent pebbles and 5 percent cobbles; neutral (pH 6.8); clear smooth boundary.

2Bt2--18 to 29 inches; yellowish brown (10YR 5/4) very gravelly clay, dark yellowish brown (10YR 4/4) moist; strong medium subangular blocky structure; hard, firm, very sticky and very plastic; common very fine and few fine roots; common very fine and few fine tubular pores; 45 percent pebbles and 10 percent cobbles; many moderately thick clay films on faces of peds and lining pores; neutral (pH 6.8); clear smooth boundary.

2Bt3--29 to 38 inches; yellowish brown (10YR 5/4) very gravelly clay, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; hard, firm, sticky and plastic; few very fine, fine and medium roots; many very fine tubular pores; 35 percent pebbles and 10 percent cobbles; many moderately thick clay films on faces of peds and lining pores; neutral (pH 6.8); clear wavy boundary.

2Bt4--38 to 60 inches; yellowish brown (10YR 5/4) extremely cobbly clay, dark yellowish brown (10YR 4/6) moist; massive; hard, firm, sticky and plastic; few very fine and fine roots; common very fine interstitial and tubular pores; 40 percent pebbles, 25 percent cobbles, and 10 percent stones; many moderately thick clay films on faces of peds and lining pores; neutral (pH 6.8).

Type location: Elko County, Nevada; about 3 miles south of Secret Pass; approximately 900 feet north and 2,100 feet east of the southwest corner of section 3, T.33 N., R.60 E.; (40 degrees, 45 minutes, 55 seconds north latitude and 115 degrees, 11 minutes, 24 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist in the winter and spring, dry mid-July through October.

Soil temperature: 42 to 47 degrees F.

Mollic epipedon thickness: 12 to 20 inches, does not include the argillic horizon.

Control section:

Clay content--35 to 50 percent.

Rock fragments--Averages 35 to 60 percent, mainly pebbles and cobbles.

Other features--Some pedons have C horizons below a depth of 50 inches.

A horizon:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--1 through 3.

Bt1 horizon:

Hue--7.5YR or 10YR.

Value--3 or 4 moist.

Chroma--3 or 4.

Texture--Clay loam.

Consistence--Hard or very hard, friable to very firm moist.

Clay content--30 to 40 percent.

Rock fragments--15 to 40 percent pebbles, 0 to 10 percent cobbles and stones.

Reaction--Slightly acid to mildly alkaline.

Other features--Moist and dry colors of this horizon do not meet the requirements of a mollic epipedon.

Lower Bt horizons:

Hue--7.5YR or 10YR.

Value--5 or 6 dry, 4 or 5 moist.

Chroma--3 through 6.

Texture--Clay with clay loam common in some subhorizons below 40 inches.

Clay content--Commonly 40 to 50 percent, but some pedons have lower subhorizons with 30 to 40 percent.

Rock fragments--35 to 50 percent pebbles, 5 to 25 percent cobbles, 0 to 15 percent stones.

Structure--Subangular blocky, angular blocky or prismatic throughout the profile but is commonly massive in the lower subhorizons.

Consistence--Hard or very hard, firm or very firm moist.
Reaction--Slightly acid through mildly alkaline.

Mizpah Series

The Mizpah series consists of moderately deep, well drained soils that formed in mixed alluvium over residuum from siltstone. Mizpah soils are on rock pediments. Slopes are 2 to 4 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Typic Paleargids

Typical pedon: Mizpah sandy loam, in an area of map unit 650. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with approximately 55 percent pebbles.

A1--0 to 3 inches; light brownish gray (10YR 6/2) sandy loam, brown (10YR 4/3) moist; moderate thick platy structure parting to weak thin platy; soft, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine and fine interstitial and vesicular pores; 10 percent pebbles; violently effervescent; mildly alkaline (pH 8.2); clear smooth boundary.

A2--3 to 6 inches; pale brown (10YR 6/3) sandy loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and few fine and medium roots; many very fine interstitial pores; 10 percent pebbles; violently effervescent; mildly alkaline (pH 8.2); clear smooth boundary.

Bqk--6 to 9 inches; pink (7.5YR 7/4) sandy loam, brown (7.5YR 4/4) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and few fine and medium roots; many very fine interstitial pores; 15 percent hard, firm 10 to 20 millimeter diameter durinodes; few fine filaments of lime; violently effervescent; mildly alkaline (pH 8.3); abrupt smooth boundary.

2Btqk--9 to 14 inches; pinkish white (7.5YR 8/2) and light brown (7.5YR 6/4) silty clay, light brown (7.5YR 6/4) moist; weak coarse prismatic structure; slightly hard, friable, sticky and very plastic; common very fine and few fine and medium roots; many very fine interstitial and tubular pores; few moderately thick clay films in pores; few thin lime coats on faces of peds; 15 percent hard, firm 5 to 10 millimeter diameter durinodes; violently effervescent; strongly alkaline (pH 8.5); clear wavy boundary.

2Btk--14 to 32 inches; light reddish brown (5YR 6/4) silty clay, reddish brown (5YR 4/4) moist; strong coarse prismatic structure; hard, firm, sticky and very plastic; common very fine roots; many very fine interstitial and tubular pores; common moderately thick clay films in pores and on faces of peds; common thick lime coats on faces of peds; strongly alkaline (pH 8.6); gradual wavy boundary.

Cr--32 to 40 inches; reddish brown (5YR 5/3) fractured weathered siltstone, reddish brown (5YR 4/4) moist; common medium soft lime masses and fine lime seams in fractures in the upper part.

Type location: Elko County, Nevada; approximately 3 miles east of Currie about 2,050 feet north and 350 feet west of the southeast corner of section 36, T.28 N., R.64 E.; (40 degrees, 15 minutes, 30 seconds north latitude and 114 degree, 41 minutes, 44 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist for short periods in the winter and spring from summer to mid fall.

Soil temperature: 47 to 52 degree F.

Depth to paralithic: 20 to 40 inches.

A horizons:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 3 dry, 3 or 4 moist.

Bt horizons:

Hue--7.5YR or 5YR.

Value--5 through 8 dry, 4 through 6 moist.

Chroma--2 through 4 dry, 3 or 4 moist.

Clay content--40 to 50 percent.

Rock fragments--0 to 10 percent pebbles.

Structure--Prismatic or angular blocky.

Consistence--Slightly hard to hard dry, friable or firm moist.

Reaction--Moderately alkaline to strongly alkaline.

Other features--10 to 15 percent 5 to 20 millimeter diameter durinodes present in some subhorizon.

Common lime coats on faces of peds, usually in lower subhorizons.

Muiral Series

The Muiral consists of moderately deep, well drained soils that formed in residuum and colluvium from calcareous siltstone, limestone and dolomite. Muiral soils are found on mountain sideslopes. Slopes are 30 to 75 percent. The mean annual precipitation is about 18 inches and the mean annual temperature is about 38 degrees F.

Taxonomic class: Loamy-skeletal, mixed Typic Cryochrepts

Typical pedon: Muiral gravelly loam, in an area of map unit 520. (Colors are for dry soils unless otherwise noted.) The soil surface is partially covered with approximately 5 percent pebbles and about 15 percent Englemann spruce branches.

Oi--3 to 2 inches; slightly decomposed Englemann spruce litter.

Oe--2 to 0 inches; intermediately decomposed Englemann spruce litter.

A1--0 to 3 inches; dark grayish brown (10YR 4/2) gravelly loam, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine, few fine through coarse roots; common very fine tubular pores; 20 percent pebbles; medium acid (pH 6.0); clear irregular boundary.

A2--3 to 9 inches; yellowish brown (10YR 5/4) gravelly loam, dark yellowish brown (10YR 3/4) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; many very fine, few fine through coarse roots; common very fine tubular pores; 30 percent pebbles; slightly acid (pH 6.2); clear wavy boundary.

Bw1--9 to 20 inches; light yellowish brown (10YR 6/4) very gravelly loam; dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; slightly hard, very friable, sticky and slightly plastic; many very fine, few fine through coarse roots; common very fine tubular pores; 35 percent pebbles, 10 percent cobbles, and 5 percent stones; slightly acid (pH 6.4); clear smooth boundary.

Bw2--20 to 33 inches; light yellowish brown (10YR 6/4) very gravelly loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; many very fine, few fine through coarse roots; common very fine tubular pores; 1 percent very fine soft masses of lime; 1 percent very thin lime pendants on undersides of rock fragments; 40 percent pebbles, 10 percent cobbles, and 5 percent stones; neutral (pH 7.3).

R--33 inches; hard calcareous siltstone.

Type location: Elko County, Nevada; approximately 10 miles southwest of Currie in the Cherry Creek mountains at about 600 feet east and 1,400 feet south of the northwest corner of section 16 T.26 N., R.63 E.; (40 degrees, 07 minutes, 55 seconds north latitude and 114 degrees, 48 minutes, 52 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually moist, moist in winter and spring, dry mid and late summer.

Soil temperature: 38 to 45 degrees F.

Summer soil temperature: 43 to 46 degrees F.

Depth to bedrock: 20 to 40 inches below the mineral soil surface.

Control section:

Clay content--12 to 18 percent.

Rock fragments--35 to 60 percent, of which 25 to 50 percent are pebbles and 10 to 20 percent are cobbles and stones.

A horizons:

Value--4 through 6 dry, 2 through 4 moist; lighter than 5.5 dry and 3.5 moist when the surface 7 inches is mixed.

Bw horizons:

Chroma--3 or 4.

Texture--Loam or silt loam.

Rock fragment--40 to 55 percent pebbles and cobbles

Mysol Series

The Mysol series consists of very deep, well drained soils that formed in lacustrine sediments over mixed alluvium. Mysol soils are on lake plains and alluvial flats. Slopes are 0 to 2 percent. The mean annual precipitation is about 7 inches and the mean annual air temperature is about 48 degrees F.

Taxonomic class: Fine-loamy over sandy or sandy-skeletal, mixed (calcareous), mesic Durorthidic Torriorthents

Typical pedon: Mysol silty clay loam, in an area of map unit 720. (Colors are for dry soils unless otherwise noted.)

A1--0 to 2 inches; white (2.5Y 8/2) silty clay loam, grayish brown (2.5Y 5/2) moist; strong thick platy structure parting to medium platy; slightly hard, very friable, sticky and plastic; few very fine roots; many fine vesicular pores; strongly effervescent; SAR 6; very strongly alkaline (pH 9.6); abrupt smooth boundary.

A2--2 to 5 inches; light gray (2.5Y 7/2) silty clay loam, grayish brown (2.5Y 5/2) moist; strong medium platy structure; slightly hard, very friable, sticky and plastic; few very fine roots matted to plate surfaces; few fine vesicular and common tubular pores; strongly effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary.

AC--5 to 17 inches; light gray (2.5Y 7/2) silty clay loam, brown (10YR 5/3) moist; pale brown (10YR 6/3) organic stains on plate surfaces; strong medium platy structure; slightly hard, very friable, sticky and plastic; many very fine, common fine and few medium roots matted on plate surfaces; common fine tubular pores; few thin lime coats on plate faces; strongly effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary.

Cqk--17 to 31 inches; very pale brown (10YR 7/4) silt loam with 1 to 2 inch lenses of silty clay loam along root channels, yellowish brown (10YR 5/4) moist; weak coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, few fine and medium roots; many very fine interstitial pores; 10 percent 1/2 inch cylindrical durinodes; many lime coats on ped surfaces; strongly effervescent; moderately alkaline (pH 8.0); clear smooth boundary.

2Cqk2--31 to 46 inches; light gray (10YR 7/2) loamy fine sand, olive brown (2.5Y 4/4) moist; few fine yellow (2.5Y 7/6) iron mottles and dark grayish brown (10YR 4/2) manganese stains; massive; hard, friable, nonsticky and nonplastic; few very fine, fine and medium roots; many very fine interstitial pores; 10 percent pebbles; 60 percent weak silica cementation; 40 percent soft matrix with 20 percent 1/2 to 1 inch diameter cylindrical durinodes; strongly effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.

2Cqk3--46 to 54 inches; light gray (2.5Y 7/2) loamy fine sand, light yellowish brown (2.5Y 6/4) moist; many medium yellow (2.5Y 7/6) iron mottles and dark grayish brown (10YR 4/2) manganese stains; massive; hard, friable, nonsticky and nonplastic; few very fine and fine roots; many very fine interstitial pores and common very fine tubular; 10 percent pebbles; 60 percent weak silica cementation; 20 percent 1/2 to 1 inch diameter cylindrical durinodes; strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

3C--54 to 60 inches; white (10YR 8/1) fine sandy loam, grayish brown (2.5Y 5/2) moist; few fine dark grayish brown (10YR 4/2) manganese stains; massive; hard, friable, slightly sticky and slightly plastic; few very fine roots; many very fine interstitial pores and few tubular; strongly effervescent; moderately alkaline (pH 8.2).

Type location: Elko County, Nevada; approximately 11 miles southeast of Currie just east of Goshute Lake, about 1,100 feet east and 2,400 feet south of the northwest corner of section 8, T.26 N., R.65 E.; (40 degrees, 08 minutes, 37 seconds north latitude and 114 degrees, 40 minutes, 12 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and early spring, dry late spring through fall.

Soil temperature: 47 to 52 degrees F.

Depth to duric horizons: 25 to 35 inches.

Depth to contrasting materials: 20 to 40 inches

Control section:

Clay content--Upper part is 20 to 35 percent and the lower part averages 2 to 8 percent.

Texture--The upper part is silty clay loam or silt loam and the lower part is stratified very gravelly coarse sand to loamy fine sand with a few thin strata of fine sandy loam.

Rock fragments--Averages 0 to 20 percent.

A horizons:

Hue--2.5Y or 10YR.

Value--3 through 5 moist.

Chroma--1 through 3.

Reaction--Strongly alkaline to very strongly alkaline.

AC horizon:

Hue--2.5Y or 10YR.

Value--4 or 5 moist.

Chroma--2 through 4.

Cqk horizon:

Value--7 or 8 dry, 4 or 5 moist.

Chroma--2 through 4.

Reaction--Moderately alkaline or strongly alkaline.

Other features--0 to 10 percent durinodes.

2Cqk horizons:

Hue--2.5Y or 10YR.

Value--6 or 7 dry.

Chroma--2 through 4.

Structure--Massive or subangular blocky.

Cementation--20 to 35 percent durinodes with 40 to 60 percent weak silica cementation.

Nevador Series

The Nevador series consists of very deep, well drained soils that formed in loamy alluvium with a component of volcanic ash. Nevador soils are on fan piedmont remnants. Slopes are 4 to 15 percent. The mean annual precipitation is about 9 inches, and the mean annual temperature is about 48 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Durixerollic Haplargids

Typical pedon: Nevador loam in an area of map unit 231. (Colors are for dry soil unless otherwise noted.) The

soil surface is partially covered by approximately 20 percent pebbles.

A--0 to 3 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and few fine and medium roots; common very fine interstitial pores; 10 percent pebbles; mildly alkaline (pH 7.6); clear smooth boundary.

Bt--3 to 13 inches; brown (10YR 5/3) clay loam, dark brown (10YR 3/3) moist; strong coarse subangular blocky structure parting to moderate medium; hard, friable, sticky and plastic; few very fine, fine and medium roots; common very fine interstitial and tubular pores; few fine clay films on faces of ped and lining pores; 10 percent pebbles; mildly alkaline (pH 7.6); clear smooth boundary.

Bqk1--13 to 25 inches; very pale brown (10YR 7/3) sandy loam, brown (10YR 5/3) moist; massive; hard, friable, nonsticky and slightly plastic; few very fine roots; 70 percent very hard and firm durinodes; 10 percent pebbles; strongly effervescent; common fine lime filaments; moderately alkaline (pH 8.2); clear smooth boundary.

Bqk2--25 to 43 inches; very pale brown (10YR 7/3) gravelly fine sandy loam, pale brown (10YR 6/3) moist; massive; soft, very friable, nonsticky and slightly plastic; few very fine interstitial pores; 20 percent pebbles; 20 percent very hard and firm durinodes; common fine lime filaments; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bqk3--43 to 60 inches; light gray (10YR 7/2) sandy loam, grayish brown (10YR 5/2) moist; massive; slightly hard, friable, nonsticky and nonplastic; common very fine interstitial pores; common fine filaments of lime lining pores; 5 percent pebbles; 70 percent very hard and firm durinodes; common fine lime filaments; strongly effervescent; moderately alkaline (pH 8.4).

Type location: Elko County, Nevada; about 1 mile north of Welcome, Nevada; approximately 700 feet west and 150 feet south of the northeast corner of section 8, T.37 N., R.61 E.; (41 degrees, 06 minutes, 48 seconds north latitude and 115 degrees, 06 minutes, 09 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry; moist in winter and spring; dry June through October.

Soil temperature: 47 to 52 degrees F.

Depth to base of Bqk horizon: 18 to 60 inches.

Depth to base of the Bt horizons: 12 to 24 inches.

Control section:

- Clay content--25 to 35 percent.
- Mineralogy--Mixed, but some influence from vitric pyroclastic materials.
- Carbonates--The A and Bt horizons are noncalcareous.
- Other features--Some pedons have Bk horizons directly underneath the Bt horizons.

A horizon:

- Value--5 or 6 dry, 3 or 4 moist. The average value of the upper 7 inches is greater than 5.5 dry.
- Chroma--2 or 3.
- Reaction--Neutral to mildly alkaline.

Bt horizon:

- Hue--10YR or 7.5YR.
- Value--5 or 6 dry, 3 or 4 moist.
- Chroma--2 to 3.
- Texture--Sandy clay loam, clay loam or loam.
- Structure--Moderate or strong, fine through coarse prismatic, subangular blocky or angular blocky.
- Reaction--Neutral to moderately alkaline.
- Rock fragments--5 to 10 percent pebbles.

Bqk horizon:

- Value--5 through 7 dry, 3 through 6 moist.
- Chroma--2 or 3.
- Texture--Stratified gravelly fine sandy loam to loamy sand.
- Rock fragments--Averages 5 to 20 percent, mostly pebbles.
- Reaction--Mildly alkaline through strongly alkaline.
- Other features--20 to 70 percent durinodes with few very thin (2 millimeter thick) discontinuous and unoriented silica laminae. The durinodes are hard or very hard, firm or very firm, and include some durinodes that are extremely hard and extremely firm. Some pedons have thin strata of sand and gravel.

Okan Series

Okan series consists of very deep, well drained soils that formed in mixed alluvium and includes calcareous loess and volcanic ash. Okan soils are on beach plains, inset fans, fan aprons, fan skirts, and narrow drainageways of hills. Slopes are 0 to 8 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Coarse-loamy, mixed (calcareous), mesic Durorthidic Xeric Torriorthents

Typical pedon: Okan sandy loam, in an area of map unit 351. (Colors are for dry soils unless otherwise noted.) The soil surface is covered with approximately 15 percent pebbles.

A1--0 to 3 inches; brown (10YR 5/3) sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium platy structure; slightly hard, very friable, nonsticky and nonplastic; many very fine and few fine roots; many very fine interstitial pores; 5 percent pebbles; many thin and few moderately thick lime coats on various sides of pebbles; slightly effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary.

A2--3 to 8 inches; light gray (10YR 7/2) sandy loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; many very fine, fine, common medium and few coarse roots; many very fine interstitial pores; 5 percent pebbles; many thin and few moderately thick lime coats on various sides of pebbles; slightly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary.

Ck--8 to 18 inches; very pale brown (10YR 7/3) sandy loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; many very fine, fine and common medium, and coarse roots; many very fine interstitial and common tubular pores; 5 percent durinodes 1/2 inch in diameter; 10 percent pebbles; many thin and few moderately thick lime coats on various sides of pebbles; strongly effervescent; moderately alkaline (pH 8.2); clear wavy boundary.

Cqk--18 to 38 inches; light gray (10YR 7/2) sandy loam, brown (10YR 5/3) moist; massive; soft, very friable, slightly sticky and nonplastic; common very fine, fine, few medium and coarse roots; many very fine interstitial pores; 30 percent durinodes 1 inch in diameter; 5 percent pebbles and 5 percent cobbles; many thin and few moderately thick lime coats on various sides of rock fragments; strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

2Cqk--38 to 60 inches; light gray (10YR 7/2) stratified extremely gravelly loamy sand to loamy sand, brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine, fine, few medium and coarse roots; many very fine interstitial pores; 55 percent pebbles and 10 percent cobbles; many thin lime and silica coats on various sides of rock fragments; strongly effervescent; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; approximately 8 miles southeast of Currie, about 1,600 feet east and 1.4 miles north of the northwest corner of section 4 in an unsectionized area, T.26 N., R.65 E.; (40 degrees, 11 minutes, 04 seconds north latitude and 114 degrees, 39 minutes, 00 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist late fall and early spring, dry late spring through mid fall.

Soil temperature: 47 to 52 degrees F.

Depth to Duric horizon: 14 to 22 inches.

Control section:

Clay content--Averages 8 to 18 percent.

Rock fragments--Averages 0 to 20 percent.

A horizons:

Value--5 through 7 dry, 3 or 4 moist. The value when mixed is greater than 5.5 dry and 3.5 moist.

Chroma--2 or 3.

Calcium carbonate equivalent--1 to 5 percent.

Ck horizon:

Value--6 or 7 dry, 3 or 4 moist.

Chroma--2 or 3.

Durinodes--5 to 10 percent.

Calcium carbonates equivalent--5 to 10 percent.

Cqk horizon:

Clay content--8 to 18 percent.

Durinodes--20 to 35 percent

Calcium carbonate equivalent--5 to 15 percent.

2Cqk horizon:

Texture--Stratified extremely gravelly loamy sand to loamy sand.

Clay content--4 to 8 percent.

Calcium carbonate equivalent--5 to 15 percent.

Onkeyo Series

The Onkeyo series consists of shallow, well drained soils that formed in residuum and colluvium from limestone and dolomite. Onkeyo soils are on mountains. Slopes are 8 to 50 percent. The mean annual precipitation is about 16 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Lithic Calcixerolls

Typical pedon: Onkeyo very gravelly silt loam located in an area of map unit 600. (Colors are for dry soil unless

otherwise noted.) The soil surface is partially covered by approximately 40 percent pebbles.

A1--0 to 3 inches; brown (10YR 5/3) very gravelly silt loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; 35 percent pebbles; slightly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

A2--3 to 8 inches; brown (10YR 5/3) very gravelly silt loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; 40 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bk--8 to 17 inches; light yellowish brown (10YR 6/4) extremely cobbly silty clay loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; common thin lime coats and pendants on undersides of rock fragments; 40 percent pebbles, 25 percent cobbles, and 5 percent stones; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.

R--17 inches; limestone.

Type location: Elko County, Nevada; approximately 6 miles south of Odgers Ranch in the Medicine Range in an unsectionized area about 1,120 feet north and 1,800 feet east of the projected southwest corner of section 27, T.27 N., R.61 E.; (40 degrees, 11 minutes, 03 seconds north latitude and 115 degrees, 05 minutes, 10 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist from late fall through spring, dry mid-July through October.

Soil temperature: 43 to 47 degrees F.

Mollic epipedon thickness: 7 to 10 inches.

Depth to calcic horizon: 7 to 10 inches.

Depth to bedrock: 14 to 20 inches.

Reaction: Mildly alkaline to strongly alkaline.

Control section:

Clay content--25 to 35 percent.

Rock fragments--50 to 80 percent, mainly cobbles.

A horizons:

Value--4 or 5 dry, 3 or 4 moist.

Effervescence--Slightly effervescent to violently effervescent.

Calcium carbonate equivalent--1 to 10 percent.

Bk horizon:

Value--6 or 7 dry, 3 through 5 moist.

Chroma--3 or 4.

Texture--Silty clay loam or silt loam.

Clay content--25 to 35 percent.

Rock fragments--50 to 80 percent, mainly cobbles.

Structure--Subangular blocky or angular blocky.

Consistence--Slightly hard to very hard dry, friable to firm moist, slightly sticky or sticky, and slightly plastic to plastic wet.

Calcium carbonate equivalent--15 to 35 percent.

Other features--Thin to thick lime coats on undersides of rock fragments.

Orupa Series

The Orupa series consists of very deep, well drained soils that formed in windblown clay. Orupa soils are on parna dunes. Slopes are 0 to 8 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Fine, montmorillonitic (calcareous), mesic Xeric Torriorthents

Typical pedon: Orupa silty clay loam located in an area of map unit 764. (Colors are for dry soil unless otherwise noted.)

A--0 to 6 inches; light brownish gray (10YR 6/2) silty clay loam, dark brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, sticky and slightly plastic; many very fine roots; many very fine interstitial pores; violently effervescent; strongly alkaline (pH 8.7); abrupt smooth boundary.

C1--6 to 21 inches; light brownish gray (10YR 6/2) silty clay, dark grayish brown (2.5Y 4/2) moist; weak medium subangular blocky structure; soft, very friable, sticky and plastic; many very fine, common fine, medium and coarse roots; many very fine tubular pores; violently effervescent; strongly alkaline (pH 9.0); clear wavy boundary.

C2--21 to 60 inches; light brownish gray (10YR 6/2) silty clay, dark grayish brown (2.5Y 4/2) moist; weak coarse subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine, few fine, medium and coarse roots; many very fine and fine tubular pores; violently effervescent; strongly alkaline (pH 9.0); clear wavy boundary.

Type location: Elko County, Nevada; approximately 13 miles northwest of Shanty, Nevada; 800 feet south and 200 feet east of the northwest corner of section 36, T.29 N., R.58 E.; (40 degrees, 21 minutes, 20 seconds north latitude and 115 degrees, 23 minutes, 34 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry summer and fall.

Soil temperature: 47 to 52 degrees F.

Other features: Soil forms sand size aggregates which initially gives a texture of fine sandy loam.

Control section:

Clay content--35 to 55 percent.

Reaction--Moderately alkaline or strongly alkaline.

A horizon:

Hue--2.5Y or 10YR.

Value--6 through 8 dry, 4 through 7 moist.

Chroma--2 or 3.

C horizons:

Hue--2.5Y or 10YR.

Value--6 through 8 dry, 4 through 7 moist.

Chroma--2 or 3.

Texture--Clay loam, silty clay loam, silty clay or clay.

Clay content--35 to 55 percent.

Structure--Granular or subangular blocky.

Consistence--Soft or slightly hard dry.

Oupico Series

The Oupico series consists of moderately deep over a duripan, well drained soils that formed in mixed alluvium. Oupico soils are on fan piedmont remnants. Slopes are 2 to 4 percent. Mean annual precipitation is about 9 inches, and the mean annual temperature is about 47 degrees F.

Taxonomic class: Coarse-loamy, mixed, mesic Xerollic Durorthids

Typical pedon: Oupico loam is located in an area of map unit 280. (Colors are for dry soils unless otherwise noted.)

A--0 to 3 inches; light brownish gray (10YR 6/2) loam, dark grayish brown (10YR 4/2) moist; weak thin platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine

interstitial pores; 5 percent pebbles; moderately alkaline (pH 7.9); abrupt wavy boundary.

Bk--3 to 11 inches; pale brown (10YR 6/3) loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, friable, nonsticky and nonplastic; few medium and coarse roots; many very fine interstitial pores; 10 percent pebbles; few fine filaments of lime; strongly effervescent; moderately alkaline (pH 8.0); clear wavy boundary.

Bqk--11 to 23 inches; very pale brown (10YR 7/3) loam, brown (10YR 5/3) moist; massive; hard, firm, nonsticky and nonplastic; few very fine and fine, medium and coarse roots; common very fine and fine interstitial pores; 10 percent pebbles; few fine filaments of lime; discontinuous brittle matrix; violently effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary.

Bqkm--23 to 45 inches; white (10YR 8/2) indurated duripan with 2 to 3 millimeter laminar cap alternating with thin discontinuous lenses of strongly cemented laminae, extremely hard, extremely firm; violently effervescent; moderately alkaline (pH 8.4).

Cqk--45 to 60 inches; white (10YR 8/2) sandy loam, brown (10YR 5/3) moist; massive; hard, firm, nonsticky and nonplastic; few very fine roots; few very fine interstitial pores; 10 percent pebbles; few fine filaments of lime; 20 percent hard durinodes in a discontinuous brittle matrix; violently effervescent; strongly alkaline (pH 8.6)

Type location: Elko County, Nevada; approximately 1 mile northeast of Wells; about 2,600 feet east and 800 feet north of the southwest corner of section 2, T.37 N., R.62 E.; (41 degrees, 06 minutes, 50 seconds north latitude and 114 degrees, 56 minutes, 05 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry June through October.

Soil temperature: 47 to 51 degrees F.

Depth to duripan: 20 to 40 inches.

Depth to Bk horizon: 2 to 5 inches.

Control section:

Clay content--8 to 18 percent.

Rock fragments--5 to 25 percent, mainly pebbles.

A horizon:

Value--6 or 7 dry.

Chroma--2 through 4.

Effervescence--Noneffervescent to slightly effervescent.

Reaction--Slightly alkaline or moderately alkaline.

Bk horizon:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--3 or 4.

Texture--Loam or sandy loam.

Carbonates--Disseminated lime, soft pockets, or films.

Bqk horizon:

Hue--7.5YR or 10YR.

Value--6 through 8 dry, 5 through 7 moist.

Chroma--2 through 4.

Texture--Loam or sandy loam.

Cementation--Thin coatings of silica or discontinuous weakly silica cemented layers.

Palinor Series

The Palinor series consists of shallow over duripan, well drained soils that formed in mixed alluvium from dominantly limestone sources. Palinor soils are on ballenas and fan piedmont remnants. Slopes are 2 to 15 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, mesic, shallow Xerollic Durorthids

Typical pedon: Palinor very gravelly loam located in an area of map unit 421. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 40 percent pebbles.

A--0 to 3 inches; light brownish gray (10YR 6/2) very gravelly loam, dark grayish brown (10YR 4/2) moist; moderate thick platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and few fine roots; many very fine and common fine vesicular pores and few very fine and fine tubular pores; 50 percent pebbles; strongly effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary.

Bw--3 to 8 inches; very pale brown (10YR 7/3) very gravelly loam, brown (10YR 5/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, common fine, medium and few coarse roots; common very fine and fine tubular pores; common thick lime coats and pendants on undersides of rock fragments; 35 percent pebbles; violently effervescent; moderately alkaline (pH 8.0); clear smooth boundary.

Bk--8 to 16 inches; very pale brown (10YR 7/3) extremely gravelly loam, brown (10YR 5/3) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine and few medium roots; few very fine tubular pores; many thick lime coats and pendants on undersides of rock

fragments; 70 percent pebbles and 5 percent cobbles; violently effervescent; moderately alkaline (pH 8.0); clear smooth boundary.

2Bqkm--16 to 34 inches; white (10YR 8/1) indurated duripan, white (10YR 8/2) moist; massive; extremely hard, extremely firm; 2 to 5 millimeter laminar cap; 50 percent pebbles and 10 percent cobbles; violently effervescent; clear wavy boundary.

2Cqk1--34 to 48 inches; very pale brown (10YR 7/3) extremely gravelly loamy coarse sand, brown (10YR 5/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots; many fine interstitial pores; many moderately thick lime and silica coats on undersides of rock fragments and common thin pendants; 70 percent pebbles and 10 percent cobbles; violently effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

3Cqk2--48 to 60 inches; white (10YR 8/2) extremely gravelly loamy coarse sand, light brownish gray (10YR 6/2) moist; massive; slightly hard, very friable, nonsticky and nonplastic; many fine interstitial pores; 50 percent discontinuous silica and lime cementation; common thin silica and lime coats on undersides of pebbles; 70 percent pebbles; violently effervescent; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; approximately 1.25 miles north of Silver Zone Pass about 900 feet north and 1,500 feet west of the southeast corner of section 6, T.35 N., R.68 E.; (40 degrees, 56 minutes, 17 seconds north latitude and 114 degrees, 19 minutes, 40 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.

Soil temperature: 47 to 52 degrees F.

Depth to duripan: 14 to 20 inches.

Reaction: Moderately alkaline or strongly alkaline.

Control section:

Clay content--10 to 18 percent.

Rock fragments--45 to 75 percent pebbles and 0 to 5 percent cobbles.

Calcium carbonate equivalent--40 to 60 percent.

A horizon:

Value--5 through 7 dry, 4 or 5 moist.

Chroma--2 or 3.

Bw horizon:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 3.

Structure--Weak or moderate subangular blocky.

Rock fragment--15 to 35 percent pebbles

Consistence--Soft or slightly hard.

Bk horizon:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 through 4.

Structure--Subangular blocky or massive.

Bqkm horizon:

Value--7 or 8 moist or dry.

Chroma--1 through 3.

Cqk horizons:

Value--6 through 8 dry, 4 through 6 moist, may be variegated in coarse textured subhorizons.

Chroma--1 through 3.

Rock fragments--45 to 70 percent pebbles, 0 to 20 percent cobbles.

Consistence--Slightly hard to hard, very friable to firm, nonplastic and slightly plastic.

Other features--Discontinuous weakly to strongly silica and lime cemented subhorizons are found in most pedons.

Parisa Series

The Parisa series consists of moderately deep over a indurated duripan, well drained soils that formed in alluvium from limestone. Parisa soils are on fan piedmont remnants and offshore bars. Slopes are 2 to 8 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, mesic Xerollic Durorthids

Typical pedon: Parisa gravelly loam located in an area of map unit 856. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 65 percent pebbles.

A1--0 to 3 inches; light brownish gray (10YR 6/2) gravelly loam, dark brown (10YR 3/3) moist; weak thick platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine roots; many very fine vesicular and tubular pores; 30 percent pebbles; slightly effervescent; moderately alkaline (pH 7.9); abrupt smooth boundary.

A2--3 to 5 inches; light brownish gray (10YR 6/2) gravelly loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; soft, very friable, slightly

sticky and slightly plastic; many very fine, common fine and medium roots; many very fine interstitial and tubular pores; 30 percent pebbles; slightly effervescent; moderately alkaline (pH 7.9); clear smooth boundary.

Bk--5 to 12 inches; pale brown (10YR 6/3) very gravelly loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and common fine, medium and coarse roots; many very fine interstitial pores; 10 percent 10 to 20 millimeter diameter durinodes; many thick lime coats and pendants on undersides of rock fragments; 35 percent pebbles; strongly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary.

Bqk1--12 to 26 inches; very pale brown (10YR 7/3) very gravelly loam, light yellowish brown (10YR 6/4) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and nonplastic; many very fine, common fine and medium roots; many very fine tubular pores; common white (10YR 8/2) soft masses of lime; 20 percent hard and brittle 15 to 25 millimeter diameter durinodes; many thick lime and silica pendants on undersides of pebbles; 45 percent pebbles; violently effervescent; strongly alkaline (pH 8.8); gradual wavy boundary.

Bqk2--26 to 36 inches; light gray (10YR 7/2) very gravelly sandy loam, brown (10YR 5/3) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic, many very fine roots; many very fine interstitial pores; common white (10YR 8/2) soft masses of lime; 50 percent discontinuous weak silica and lime cementation; many thick lime coats and pendants on undersides of pebbles; 40 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.

Bqkm--36 to 60 inches; indurated duripan; massive; extremely hard extremely firm; violently effervescent.

Type location: Elko County, Nevada; approximately 18 miles northeast of Odgers Ranch about 2,000 feet north and 1,500 feet west of the southeast corner of section 30, T.31 N., R.63 E.; (40 degrees, 32 minutes, 08 seconds north latitude and 114 degrees, 53 minutes, 55 seconds west longitude.)

Range in characteristics:

Soil moisture: usually dry, moist in winter and spring, dry late spring, summer and fall.

Soil temperature: 47 to 52 degrees F.

Depth to lime and silica cementation: 5 to 24 inches.

Depth to indurated duripan: 20 to 40 inches.

Reaction: Moderately alkaline or strongly alkaline.

Control section:

Clay content--8 to 18 percent.

Rock fragments--35 to 60 percent, dominantly pebbles.

Calcium carbonate equivalent--40 to 60 percent by weight of the 20 millimeters fraction.

Other features--Some pedons have thin strata of gravelly loam in the control section.

A horizons:

Value--5 or 6 dry, 3 or 4 moist.

Chroma--2 or 3.

Bk horizon:

Silica cementation--May contain up to 10 percent durinodes.

Other features--Thin to thick lime coats on undersides of rock fragments.

Bqk horizons:

Hue--10YR or 7.5YR.

Value--6 or 7 dry, 4 through 6 moist.

Chroma--2 through 4.

Structure--Weak to moderate subangular blocky or massive.

Textures--Loam and sandy loam.

Consistence--Very friable to brittle moist.

Silica cementation--20 to 60 percent discontinuous weak silica cementation and some pedons have subhorizons with up to 20 percent durinodes.

Other features--Thin to thick lime coats on undersides of rock fragments.

Bqkm horizon:

Structure--Coarse to very coarse platy, or it is massive.

Peeko Series

The Peeko series consists of shallow over a indurated duripan, well drained soils that formed in loess with a component of volcanic ash over mixed alluvium. Peeko soils are on fan piedmont remnants. Slopes are 2 to 30 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Loamy, mixed, mesic, shallow Xerollic Durorthids

Typical pedon: Peeko gravelly loam located in an area of map unit 276. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 10 percent pebbles.

A1--0 to 1 inches; light brownish gray (10YR 6/2) gravelly loam, dark grayish brown (10YR 4/2) moist; moderate thick platy structure; slightly hard, very friable, slightly

sticky and slightly plastic; common very fine, fine and few medium roots; many very fine interstitial pores; 30 percent pebbles; strongly effervescent; moderately alkaline (pH 8.0); clear smooth boundary.

A2--1 to 4 inches; light brownish gray (10YR 6/2) gravelly loam, dark brown (10YR 4/3) moist; weak thin platy parting to weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; many very fine interstitial pores; 20 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

Bqk--4 to 10 inches; pale brown (10YR 6/3) very gravelly silt loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine and medium roots; many very fine tubular pores; 35 percent pebbles; discontinuous weakly silica and lime cemented matrix with 10 percent hard, firm durinodes; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bqkm--10 to 30 inches; indurated duripan with a 1 millimeter laminar cap.

Type location: Elko County, Nevada; approximately 2 miles southwest of Moore Summit in Independence Valley; located in an unsectionized area 2,200 feet north and 300 feet east of the projected southwest corner of section 8, T.37 N., R.64 E.; (41 degrees, 06 minutes, 07 seconds north latitude and 114 degrees, 46 minutes, 30 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry fall and summer.

Soil temperature: 47 to 52 degrees F.

Depth to indurated duripan: 10 to 20 inches.

Control section:

Clay content--18 to 27 percent.

Rock fragments--Averages 15 to 35 percent, mainly pebbles of which approximately 80 to 90 percent are comprised of duripan fragments.

Effervescence--Strongly effervescent or violently effervescent.

A horizons:

Value--6 or 7 dry, 3 or 4 moist.

Chroma--2 or 3.

Bqk horizon:

Value--6 through 8 dry, 4 through 6 moist.

Chroma--3 or 4.

Consistence--Soft or slightly hard, very friable or friable, slightly sticky or sticky, nonplastic to plastic.

Cementation--10 to 40 percent weak or strongly cemented durinodes.

Texture--Silt loam.

Coarse fragments--15 to 40 percent pebbles and duripan fragments of which up to 30 percent are cobble size.

Pharo Series

The Pharo series consists of very deep somewhat excessively drained soils that formed in alluvium from limestone and dolomite. Pharo soils are on ballenas and fan piedmont remnants. Slopes are 4 to 15 percent. The mean annual precipitation is about 13 inches and the mean annual temperature is about 45 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, mesic
Aridic Calcixerolls

Typical pedon: Pharo gravelly loam in an area of map unit 1161. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 40 percent pebbles.

A1--0 to 2 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak thick platy structure parting to fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; 25 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

A2--2 to 13 inches; brown (10YR 5/3) gravelly loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; 30 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bk1--13 to 23 inches; light gray (10YR 7/2) very gravelly loam, yellowish brown (10YR 5/4) moist; strong medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; continuous weak lime cementation with moderate lime coats on coarse fragments; 35 percent pebbles; violently effervescent; strongly alkaline (pH 8.7); clear smooth boundary.

Bk2--23 to 36 inches; white (10YR 8/2) extremely gravelly sandy loam, light yellowish brown (10YR 6/4) moist;

massive; slightly hard, friable, nonsticky and slightly plastic; continuous weak lime cementation with moderately thick lime coats on rock fragments; 65 percent pebbles and 2 percent cobbles; violently effervescent; strongly alkaline (pH 8.7); clear smooth boundary.

Bk3--36 to 60 inches; light yellowish brown (10YR 6/4) extremely gravelly coarse sand, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; continuous weak lime cementation with thick lime pendants on undersides of coarse fragments; 70 percent pebbles and 5 percent cobbles; violently effervescent; strongly alkaline (pH 9.0).

Type location: Elko County, Nevada; about 16 miles north of Currie, Nevada in the southern end of the Pequop Mountains, approximately 500 feet south and 1,200 feet west of the northeast corner of section 36, T.31 N., R.64 E.; (40 degrees, 31 minutes, 34 seconds north latitude and 114 degrees, 41 minutes, 15 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist 60 to 90 consecutive days during the 120 days after the winter solstice. These soils are dry in the moisture control section more than 50 percent of the time the soil temperature is above 41 degrees F., and are continually dry for more than 60 consecutive days during the summer months in more than 7 out of 10 years.

Soil temperature: 47 to 52 degrees F.

Depth to calcic horizon: 7 to 18 inches, and this horizon is 23 inches or more thick.

Control section:

Texture--Silt loam or loam to sandy loam averaging 50 to 70 percent gravel. Coarse sand may be present in the lower part of the particle-size control section in some pedons.

Calcium carbonate equivalent--40 to 80 percent.

A horizons:

Chroma--2 or 3.

Reaction--Mildly or moderately alkaline.

Effervescence--Slightly or strongly effervescent.

Structure--Granular, platy, or subangular blocky.

Consistence--Soft to slightly hard and friable to very friable.

Bk horizons:

Hue--of 7.5YR or 10YR.

Value--6 through 8 dry, 4 through 6 moist.

Chroma--2 through 4.

Reaction--Mildly to strongly alkaline.

Effervescence--Strongly or violently effervescent.

Other features--Carbonates are as masses and as coatings on gravel.

Structure--Subangular blocky or massive.

Consistence--Loose, or slightly hard, friable to very friable, nonsticky to slightly sticky, and nonplastic or slightly plastic.

Piltdown Series

The Piltdown series consists of very deep, well drained soils that formed in loamy alluvium derived from mixed volcanic and sedimentary rock. Piltdown soils are on sand sheets. Slopes are 2 to 8 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Coarse-loamy, mixed (calcareous), mesic Typic Torriorthents

Typical pedon: Piltdown fine sandy loam located in an area of map unit 961. (Colors are for dry soil unless otherwise noted.)

A1--0 to 4 inches; light brownish gray (2.5Y 6/2) fine sandy loam, dark grayish brown (2.5Y 4/2) moist; weak very thick platy structure; soft, very friable, nonsticky and nonplastic; few very fine and fine roots; many very fine interstitial and common fine vesicular pores; slightly effervescent; moderately alkaline (pH 7.9); clear smooth boundary.

A2--4 to 10 inches; light brownish gray (2.5Y 6/2) fine sandy loam, dark grayish brown (2.5Y 4/2) moist; weak very coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine, common fine and few medium roots; many very fine interstitial and few very fine tubular pores; slightly effervescent; moderately alkaline (pH 7.9); clear smooth boundary.

C1--10 to 28 inches; light brownish gray (2.5Y 6/2) fine sandy loam, grayish brown (2.5Y 5/2) moist; massive; slightly hard, very friable, nonsticky and nonplastic; common very fine, fine and few medium roots; common very fine tubular pores; strongly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

C2--28 to 44 inches; light gray (2.5Y 7/2) very fine sandy loam, grayish brown (2.5Y 5/2) moist; massive; slightly

hard, very friable, nonsticky and nonplastic; common very fine, few fine and medium roots; common very fine tubular pores; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

C3--44 to 60 inches; grayish brown (2.5Y 7/2) very fine sandy loam, light gray (2.5Y 5/2) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots; common very fine and few fine tubular pores; violently effervescent; moderately alkaline (pH 8.4)

Type location: Elko County, Nevada; approximately 3 miles west of White Horse Mountain; about 1,000 feet north and 2,600 feet east of the southwest corner of section 19, T.28 N., R.68 E.; (40 degrees, 16 minutes, 45 seconds north latitude and 114 degrees, 20 minutes, 30 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist for short periods in the winter and spring, dry late May through November.

Soil temperature: 47 to 53 degrees F.

Reaction: Mildly alkaline through strongly alkaline.

Effervescence: Slightly effervescent to violently effervescent throughout the profile.

Control section:

Clay content--10 to 18 percent

Rock fragments--Up to 15 percent, mainly pebbles with thin strata of up to 25 percent.

A horizons:

Hue--10YR or 2.5Y.

Value--5 through 7 dry, 3 through 5 moist.

Chroma--2 or 3.

C horizons:

Hue--10YR or 2.5Y.

Value--5 through 7 dry, 3 through 5 moist.

Chroma--2 or 3.

Texture--Loam, sandy loam, fine sandy loam or very fine sandy loam.

Consistence--Soft through slightly hard dry, very friable or friable moist.

Pioche Series

The Pioche series consist of very shallow and shallow, well drained soils that formed in residuum from andesite. The Pioche soils are on mountains. Slopes are 2 to 50 percent.

The mean annual precipitation is about 13 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, mesic Lithic Argixerolls

Typical pedon: Pioche very gravelly sandy loam located in an area of map unit 430. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 40 percent gravel, 10 percent cobbles, and 2 percent stones.

A--0 to 2 inches; grayish brown (10YR 5/2) very gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak thin platy structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores; 35 percent pebbles and 10 percent cobbles; neutral (pH 7.0); abrupt smooth boundary.

Bt1--2 to 6 inches; grayish brown (10YR 5/2) very cobbly clay, very dark grayish brown (10YR 3/2) moist; weak fine prismatic structure parting to moderate medium subangular blocky; hard, friable, sticky and plastic; common very fine, fine, medium and few coarse roots; common very fine tubular pores; few thin clay films lining pores and faces of peds; 30 percent pebbles and 20 percent cobbles; neutral (pH 7.2); abrupt smooth boundary.

Bt2--6 to 12 inches; yellowish brown (10YR 5/4) very cobbly clay, dark brown (10YR 3/3) moist; moderate fine angular blocky structure; hard, friable, sticky and plastic; common very fine, fine, few medium and coarse roots; common very fine tubular pores; common thin clay films lining pores and on faces of peds; 30 percent pebbles and 20 percent cobbles; neutral (pH 7.0).

2R--12 inches; slightly weathered rhyolite.

Type location: Elko County, Nevada; approximately 26 miles northwest of Wendover, Nevada; about 100 feet north and 450 feet west of the southeast corner of section 25, T.37 N., R.67 E.; (41 degrees, 03 minutes, 16 seconds north latitude and 114 degrees, 20 minutes, 06 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist winter and spring, dry summer and fall.

Soil temperature: 47 to 53 degrees F.

Depth to bedrock: 6 to 15 inches.

Thickness of mollic epipedon: 7 to 10 inches when the upper 7 inches of the soil is mixed, extends into upper part of argillic horizon or to bedrock when the depth is less than 7 inches.

Reaction: Neutral or mildly alkaline.

Control section:

Clay content--35 to 50 percent.

Rock fragments--35 to 50 percent, dominantly cobbles.

A horizon:

Hue--10YR or 7.5YR.

Value--4 or 5 dry, 2 or 3 moist.

Chroma--2 or 3.

Bt horizons:

Hue--10YR, 7.5YR, 5YR.

Value--4 or 5 dry, 2 through 4 moist.

Chroma--2 through 4.

Structure--Weak or moderate prismatic; moderate or strong, fine or medium angular blocky; moderate or strong subangular blocky.

Consistence--Slightly hard or hard dry, friable or firm moist, sticky or very sticky and plastic or very plastic wet.

Pookaloo Series

The Pookaloo series consists of shallow, well drained soils that formed in residuum and colluvium from limestone and dolomite. Pookaloo soils are on hills and mountains. Slopes are 8 to 50 percent. The mean annual precipitation is about 13 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, mesic Lithic Xerollic Calciorthids

Typical pedon: Pookaloo very gravelly loam located in an area of map unit 575. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 50 percent pebbles.

A--0 to 2 inches; light brownish gray (10YR 6/2) very gravelly loam, dark brown (10YR 3/3) moist; weak medium platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine interstitial pores; 40 percent pebbles; strongly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary.

Bk1--2 to 5 inches; pale brown (10YR 6/3) very gravelly loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine interstitial pores; common thick lime coats and pendants on undersides of pebbles; 40

percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bk2--5 to 14 inches; very pale brown (10YR 7/3) very gravelly loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; few fine and medium roots; common very fine interstitial pores; common thick lime coats and pendants on undersides of pebbles; 45 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

R--14 inches; dolomite.

Type location: Elko County, Nevada; approximately 10 miles southeast of Wells in the Wood Hills; about 2,000 feet south and 600 feet east of the projected northwest corner of section 22, T.37 N., R.63 E.; (41 degrees, 04 minutes, 35 seconds north latitude and 114 degrees, 50 minutes, 54 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry summer and fall except for 10 to 20 days between July and October due to convection storms.

Soil temperature: 47 to 52 degrees F.

Depth to bedrock: 14 to 20 inches.

Depth to calcic horizon: 2 to 6 inches.

Control section:

Clay content--10 to 18 percent.

Rock fragments--35 to 50 percent, mainly pebbles.

Calcium carbonate equivalent--40 to 70 percent for less than 20 millimeter material.

A horizon:

Value--5 through 7 dry, 3 through 6 moist.

Chroma--2 through 6 moist or dry.

Bk horizons:

Value--5 through 7 dry, 4 through 6 moist.

Chroma--3 through 6 moist or dry.

Structure--Subangular blocky or it is massive.

Texture--Silt loam or loam.

Secondary carbonates--5 to 20 percent by volume 1 to 5 millimeters thick lime pendants on undersides of pebbles.

Pyrat Series

The Pyrat series consists of very deep, well drained soils that formed in mixed alluvium. Pyrat soils are on fan piedmont remnants, beach plains, fan skirts, alluvial fans,

inset fans, and offshore bars. Slopes are 2 to 30 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 49 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic
Durixerollic Calciorthids

Typical pedon: Pyrat gravelly sandy loam located in an area of map unit 1000. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 20 percent pebbles.

A1--0 to 2 inches; light gray (10YR 7/2) gravelly sandy loam, brown (10YR 5/3) moist; weak medium platy structure; soft, very friable, slightly sticky and nonplastic; many very fine roots; many very fine interstitial pores; 25 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

A2--2 to 6 inches; light gray (10YR 7/2) gravelly sandy loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and nonplastic; many very fine and common fine, medium and coarse roots; many very fine interstitial pores; few thin lime coats on pebbles; 25 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bw--6 to 14 inches; very pale brown (10YR 7/3) very gravelly sandy loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and nonplastic; many very fine, common fine and medium roots; many very fine interstitial pores; few thin lime coats on pebbles; 35 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

Bk--14 to 21 inches; very pale brown (10YR 7/3) very gravelly sandy loam, light yellowish brown (10YR 6/4) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; many very fine and common fine roots; many very fine interstitial pores; 5 percent 10 to 25 millimeter durinodes; common thin lime coats on pebbles; 35 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); abrupt wavy boundary.

Bqk1--21 to 31 inches; white (10YR 8/2) very gravelly sandy loam, very pale brown (10YR 7/4) moist; massive; hard, firm, nonsticky and nonplastic; common very fine roots; common very fine tubular pores; 70 percent weak silica cementation; many thin lime coats with many thick lime coats on undersides of pebbles; 35 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

Bqk2--31 to 42 inches; white (10YR 8/2) very gravelly sandy loam, very pale brown (10YR 7/4) moist;

massive; hard, firm, nonsticky and nonplastic; common very fine roots; common very fine tubular pores; 30 percent weak silica cementation; many thin lime coats with many thick lime coats on undersides of pebbles; 50 percent pebbles and 5 percent cobbles; violently effervescent; strongly alkaline (pH 8.8); clear wavy boundary.

Ck--42 to 60 inches; very pale brown (10YR 7/3) stratified very gravelly loamy sand to very gravelly sandy loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, very friable, nonsticky and nonplastic; many very fine roots; many very fine and fine interstitial pores; common thin lime coats and pendants on undersides of pebbles; 45 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.

Type location: Elko County, Nevada; approximately 10 miles northeast of Odgers Ranch; about 1,500 feet north and 1,800 feet east of the southwest corner of section 4, T.29 N., R.63 E.; (40 degrees, 25 minutes, 03 seconds north latitude and 114 degrees, 52 minutes, 33 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist in winter and spring, dry June through October.

Soil temperature: 47 to 52 degrees F.

Depth to Bk horizon: 14 to 20 inches.

Depth to Bqk horizon: 18 to 32 inches.

Thickness of calcic horizon: 18 to 40 inches.

Control section:

Clay content--5 to 18 percent.

Rock fragments--35 to 80 percent.

A horizons:

Value--6 or 7 dry, 3 through 5 moist.

Chroma--2 through 4.

Bw horizon:

Value--6 or 7 dry, 4 through 6 moist.

Chroma--3 or 4.

Structure--Medium or coarse subangular blocky.

Consistence--Nonsticky or slightly sticky wet.

Bk horizon:

Value--6 through 8 dry, 4 through 7 moist.

Chroma--2 through 4.

Structure--Massive or subangular blocky.

Texture--Loam or sandy loam.

Consistence--Slightly hard to very hard dry, friable to firm moist, nonsticky or slightly sticky and nonplastic or slightly plastic wet.

Reaction--Moderately alkaline or strongly alkaline.
 Other features--Up to 15 percent discontinuous weak lime-silica cementation or durinodes may be present.

Bqk horizons:

Value--6 through 8 dry, 5 through 7 moist.
 Chroma--2 through 4.
 Consistence--Friable or firm moist.
 Reaction--Moderately alkaline or strongly alkaline.
 Other features--30 to 70 percent weak silica-lime cementation occurring as discontinuous horizontal strata.

C horizon:

Value--6 or 7 dry, 5 or 6 moist.
 Chroma--2 through 4.
 Texture--Stratified very gravelly sandy loam to extremely gravelly loamy sand.
 Consistence--slightly hard or hard dry.
 Reaction--Moderately alkaline or strongly alkaline.
 Rock fragments--35 to 85 percent pebbles, up to 10 percent cobbles.

Ragtown Series

The Ragtown series consists of very deep, moderately well drained soils that formed in lacustrine sediments. Ragtown soils are on lake plains. Slopes are 0 to 4 percent. The mean annual precipitation is about 5 inches and the mean annual temperature is about 53 degrees F.

Taxonomic class: Fine, montmorillonitic (calcareous), mesic Typic Torriorthents

Typical pedon: Ragtown silty clay loam, in an area of map unit 1271. (Colors are for dry soil unless otherwise noted.)

A--0 to 5 inches; light gray (2.5Y 7/2) silty clay loam, grayish brown (2.5Y 5/2) moist; strong coarse platy structure parting to very fine platy; slightly hard, very friable, sticky and plastic; few very fine roots; many very fine and few fine vesicular and interstitial pores; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary.

C--5 to 16 inches; very pale brown (10YR 7/3) silty clay loam, yellowish brown (10YR 5/4) moist; strong coarse prismatic structure; slightly hard, friable, sticky and plastic; many very fine, fine and few medium to coarse roots; many very fine and common fine tubular pores;

violently effervescent; very strongly alkaline (pH 9.4); clear smooth boundary.

2C1--16 to 26 inches; very pale brown (10YR 7/3) silty clay, yellowish brown (10YR 5/4) moist; moderate coarse prismatic structure; slightly hard, friable, very sticky and very plastic; few very fine to medium roots; few very fine tubular pores; few fine soft masses of gypsum; violently effervescent; very strongly alkaline (pH 9.4); clear smooth boundary.

2C2--26 to 60 inches; light gray (5Y 7/2) silty clay, pale olive (5Y 6/3) moist; strong coarse prismatic structure parting to very fine granular; hard, friable, very sticky and very plastic; few fine to coarse roots; few fine soft masses of gypsum; violently effervescent; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; approximately 16 miles northeast of Spruce Mountain in the south end of Independence Valley, located in an unsectionized area about 3,500 feet east and 500 feet south of the northeast corner of section 25, T.33 N., R.64 E.; (40 degrees, 42 minutes, 56 seconds north latitude and 114 degrees, 40 minutes, 06 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, intermittently moist for short periods in the winter and spring, dry May through November.

Soil temperature: 53 to 57 degrees F.

Depth to fine textured materials: 16 to 32 inches.

Control section:

Clay content--Averages 35 to 45 percent with 25 to 35 percent clay in the upper part and more than 35 percent clay in the lower part.

Texture--Stratified silty clay loam, clay loam or sandy clay loam in the upper part and stratified clay, silty clay or silty clay loam in the lower part.

Reaction--Moderately alkaline to very strongly alkaline. Very strongly alkaline usually occurs in strongly saline-sodic affected areas.

Effervescence--Slightly to violently effervescent.

A horizon:

Hue--10YR, 2.5Y, or 5Y.

Value--5 through 7 dry and 3 through 5 moist.

Chroma--2 through 4.

C horizons:

Hue--10YR, 2.5Y, 5Y.

Value--6 or 7 dry and 4 through 6 moist.

Chroma--2 through 4.

Consistence--Slightly hard or hard dry, sticky or very sticky and plastic or very plastic wet.

Secondary carbonates--Are common in any subhorizon.

Relict redox concentration--Are typically present in any subhorizon, but are not diagnostic for the series.

Other features--Ck horizons with secondary carbonates may be present or absent in any pedon. Some pedons have few fine soft masses of gypsum.

Rozara Series

Rozara series consists of shallow, well drained soils that formed in residuum and colluvium from granite. Rozara soils are on mountains. Slopes are 15 to 50 percent. The mean annual precipitation is about 16 inches and the mean annual air temperature is about 43 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Lithic Argixerolls

Typical pedon: Rozara very gravelly loamy coarse sand, in an area of map unit 470. The soil surface is covered with approximately 50 percent pebbles. (Colors are for dry soil unless otherwise noted.)

Oi--1 to 0 inches; needles, leaves and twigs; abrupt smooth boundary.

A--0 to 2 inches; grayish brown (10YR 5/2) very gravelly loamy coarse sand, very dark gray (10YR 3/1) moist; weak coarse platy structure; soft, very friable, nonsticky and nonplastic; common very fine roots; few medium tubular and common fine interstitial pores; 40 percent pebbles; mildly alkaline (pH 7.4); abrupt smooth boundary.

Bt1--2 to 6 inches; grayish brown (10YR 5/2) very gravelly loam, black (10YR 2/1) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine and medium roots; few very fine tubular and common very fine and fine interstitial pores; few thin clay films coating sand grains and lining pores; 40 percent pebbles; mildly alkaline (pH 7.6); abrupt wavy boundary.

Bt2--6 to 11 inches; grayish brown (10YR 5/2) very gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; few very fine and fine and common medium and coarse roots; common very fine interstitial pores; few thin clay films coating sand grains and lining pores; 55 percent pebbles; mildly alkaline (pH 7.6); clear wavy boundary.

R--11 inches; granite bedrock.

Type location: Elko County, Nevada about 5 miles north of Silver Zone Pass in the Toano Range; approximately 2,000 feet east and 2,400 feet south of the projected northwest corner of section 17, T.36 N., R.68 E.; (41 degrees, 00 minutes, 15 seconds north latitude and 114 degrees, 18 minutes, 24 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist late fall through spring, dry in summer through mid fall.

Soil temperature: 45 to 47 degrees F.

Depth to bedrock: 10 to 14 inches.

Control section:

Clay content--14 to 18 percent.

Rock fragments--45 to 60 percent. Dominantly 2 to 5 millimeter granitic fragments.

A horizon:

Chroma--1 or 2 moist.

Bt horizons:

Value--2 or 3 moist.

Chroma--1 or 2 moist.

Texture--Sandy loam or loam

Clay content--14 to 18 percent.

Rock fragments--45 to 60 percent.

Structure--Weak or moderate, fine and medium subangular blocky.

Rubicity Series

The Rubicity series consists of very deep, well drained soils that formed in alluvium from pegmatitic granite. Rubicity soils are on alluvial fans. Slopes are 2 to 15 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Coarse-loamy, mixed, frigid Cumulic Haploxerolls

Typical pedon: Rubicity gravelly sandy loam, in an area of map unit 1700. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 30 percent pebbles.

A1--0 to 3 inches; dark grayish brown (10YR 4/2) gravelly sandy loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine, fine, few medium and coarse roots; common very fine interstitial

pores; 20 percent pebbles; slightly acid (pH 6.2); clear smooth boundary.

A2--3 to 20 inches; dark grayish brown (10YR 4/2) very gravelly sandy loam, very dark brown (10YR 2/2) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine, fine, few medium and coarse roots; common very fine interstitial pores; 40 percent pebbles; neutral (pH 6.6); clear smooth boundary.

A3--20 to 27 inches; dark grayish brown (10YR 4/2) gravelly sandy loam, very dark brown (10YR 2/2) moist; moderate medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common very fine, few fine, medium and coarse roots; common very fine, few fine and medium tubular and interstitial pores; 25 percent pebbles; neutral (pH 6.8); gradual smooth boundary.

A4--27 to 42 inches; dark grayish brown (10YR 4/2) gravelly sandy loam, very dark brown (10YR 2/2) moist; moderate coarse subangular blocky structure; slightly hard, very friable, nonsticky and slightly plastic; few very fine coarse roots; common very fine, few fine and coarse interstitial and tubular pores; 20 percent pebbles; neutral (pH 6.8); gradual smooth boundary.

C--42 to 60 inches; yellowish brown (10YR 5/4) sandy loam, dark yellowish brown (10YR 3/6) moist; massive; slightly hard, friable, nonsticky and slightly plastic; few very fine and medium roots; common very fine, few fine and coarse interstitial and tubular pores; 10 percent pebbles; neutral (pH 7.0).

Type location: Elko County, Nevada; about 6 miles southwest of Arthur, Nevada; approximately 1,500 feet north and 2,800 feet west of the southeast corner of section 30, T.33 N., R.60 E.; (40 degrees, 42 minutes, 32 seconds north latitude and 115 degrees, 14 minutes, 47 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually moist, moist in winter and spring, dry in late summer and fall.

Soil temperature: 44 to 47 degrees F.

Mollic epipedon thickness: 30 to 45 inches, with irregular organic carbon distribution.

Reaction: Slightly acid or neutral.

Control section:

Clay content--10 to 18 percent.

Rock fragments--Averages 15 to 35 percent pebbles, dominantly 2 to 5 millimeter.

A horizon (lower part):

Value--4 or 5 dry, 2 or 3 moist.

Rock fragments--Averages 15 to 35 percent.

Reaction--Slightly acid to neutral.

C horizon:

Value--5 or 6 dry, 3 or 4 moist.

Chroma--3 or 4 dry, 4 through 6 moist.

Texture--Sandy loam, gravelly sandy loam.

Rock fragments--10 to 25 percent pebbles.

Rubylake Series

The Rubylake series consists of very deep, poorly drained soils that formed in loess and mixed silty alluvium over lacustrine sediments. Rubylake soils are on lake plain terraces. Slopes are 0 to 4 percent. The mean annual precipitation is about 8 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Fine-silty, carbonatic, mesic Mollic Fluvaquents

Typical pedon: Rubylake clay loam, in an area of map unit 764. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; dark gray (10YR 4/1) clay loam, black (10YR 2/1) moist; moderate medium prismatic structure; slightly hard, very friable, sticky and plastic; many very fine and common fine and medium roots; many very fine vesicular and interstitial pores; strongly effervescent; strongly alkaline (pH 8.8); abrupt smooth boundary.

A2--2 to 7 inches; dark gray (10YR 4/1) clay loam, black (10YR 2/1) moist; moderate medium prismatic structure parting to subangular blocky; slightly hard, very friable, sticky and plastic; many very fine, common fine and medium roots; many very fine and fine interstitial pores; strongly effervescent; strongly alkaline (pH 9.0); abrupt wavy boundary.

C1--7 to 13 inches; light gray (10YR 6/1) silt loam, dark gray (10YR 4/1) moist; moderate very coarse prismatic structure parting to moderate thick platy; soft, very friable, sticky and slightly plastic; many very fine, fine and medium roots; many very fine and fine interstitial pores; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary.

C2--13 to 23 inches; light gray (10YR 6/1) silt loam, dark gray (10YR 4/1) moist; moderate very coarse prismatic structure; soft, very friable, sticky and slightly plastic; common very fine and few fine roots; many very fine,

common fine and medium tubular pores; violently effervescent; strongly alkaline (pH 9.0); clear wavy boundary.

Akb1--23 to 43 inches; gray (10YR 5/1) silt loam, very dark gray (10YR 3/1) moist; moderate very coarse prismatic structure parting to moderate coarse angular blocky; slightly hard, very friable, sticky and slightly plastic; common very fine and few fine roots; many very fine, common fine and medium tubular pores; common fine filaments of lime; violently effervescent; strongly alkaline (pH 8.8); clear irregular boundary.

Akb2--43 to 55 inches; gray (N 5/0) silt loam, very dark gray (N 3/0) moist; moderate coarse prismatic structure parting to moderate coarse angular blocky; hard, friable, sticky and plastic; common very fine and few fine roots; many very fine, common fine and medium tubular pores; common fine filaments of lime; violently effervescent; strongly alkaline (pH 8.8); clear irregular boundary.

Cb--55 to 60 inches; white (5Y 8/1) silty clay loam, light gray (5Y 7/1) moist; massive; hard, firm, sticky and plastic; common very fine tubular pores; few medium dark brown (7.5YR 4/4) mottles along root channels; fine medium filaments of lime; violently effervescent; strongly alkaline (pH 8.9).

Type location: Elko County, Nevada; about 12.5 miles northeast of the Ruby Lake National Wildlife Refuge Headquarters; approximately 900 feet south of the northeast corner of section 35, T.29 N., R.58 E.; (40 degrees, 21 minutes, 18 seconds north latitude and 115 degrees, 23 minutes, 37 seconds west longitude.)

Range in characteristics:

Soil moisture: Saturated below depths of 12 to 24 inches from mid spring to early summer then below 48 to 60 inches in mid to late summer.

Mollic subgroup feature: 7 to 10 inches thick

Soil temperature: 47 to 52 degrees F.

Control section:

Clay content--18 to 25 percent.

Reaction--Strongly alkaline or very strongly alkaline.

Calcium carbonate equivalent--40 to 50 percent.

Other features--Ostracod and gastropod shells and shell fragments are common in some pedons.

A horizons:

Value--4 or 5 dry, 2 or 3 moist.

Effervescence--Strongly effervescent to violently effervescent.

Other features--Calcium carbonate equivalent 30 to 40 percent.

C horizons:

Structure--Prismatic parting to platy or prismatic parting to angular blocky.

Consistence--Soft or slightly hard.

Other features--10 to 20 percent 1/2 to 1 inch diameter irregular lime nodules are common in lower subhorizons of some pedons.

Ab horizons:

Hue--10YR, 2.5Y or neutral.

Value--4 or 5 dry, 2 or 3 moist.

Chroma--0 or 1.

Calcium carbonate equivalent--40 to 45 percent.

Saltair Series

The Saltair series consists of very deep, poorly drained, slowly permeable soils that formed in lacustrine sediments. Saltair soils are on lake plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 6 inches and the mean annual temperature is about 50 degrees F.

Taxonomic class: Fine-silty, mixed, mesic Typic Salorthids

Typical pedon: Saltair silt loam located in an area of map unit 161. (Colors are for dry soil unless otherwise noted.)

Az--0 to 1 inches; light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; weak very fine granular structure; slightly hard, very friable, sticky and slightly plastic; many fine salt crystals; violently effervescent; strongly alkaline (pH 8.5); abrupt wavy boundary.

Cz1--1 to 3 inches; light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; moderate thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine, medium and coarse roots; common very fine vesicular pores; many fine salt crystals; violently effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

Cz2--3 to 4 inches; light gray (10YR 7/2) silt loam, pale brown (10YR 6/3) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine, medium and coarse roots; many very fine, common fine and few medium tubular pores; common fine salt crystals; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

Cz3--4 to 8 inches; light gray (10YR 7/2) silt loam, pale brown (10YR 6/3) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine, medium and coarse roots; many very fine, common fine and few medium tubular pores; common

very fine salt crystals; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

Cz4--8 to 11 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 5/3) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine, fine and medium roots; many very fine, common fine and medium tubular pores; common very fine salt crystals; many very fine strong brown (7.5YR 5/6) mottles; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary.

2Cz5--11 to 17 inches; white (10YR 8/1) silty clay loam, light gray (10YR 7/2) moist; strong thin platy structure; hard, friable, sticky and plastic; few very fine, fine and medium roots; many very fine tubular pores; few very fine salt crystals; many very fine, fine and medium strong brown (7.5YR 5/6) mottles; violently effervescent; strongly alkaline (pH 8.5); clear smooth boundary.

2Cz6--17 to 24 inches; white (10YR 8/2) silty clay loam, pale brown (10YR 6/3) moist; strong thin platy structure; slightly hard, very friable, sticky and plastic; few very fine, fine and medium roots; many very fine tubular pores; few very fine salt crystals; common very fine dark brown (7.5YR 4/2) mottles; violently effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

2Cz7--24 to 33 inches; white (10YR 8/2) silty clay loam, pale brown (10YR 6/3) moist; strong thin platy structure; slightly hard, very friable, sticky and plastic; few very fine, fine and medium roots; many very fine tubular pores; common very fine salt crystals; few very fine dark brown (7.5YR 4/2) mottles; 20 to 30 percent hard nodules; few coarse lime masses on nodules; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary.

2Cz8--33 to 60 inches; white (10YR 8/2) silty clay loam, pale brown (10YR 6/3) moist; strong thin platy structure; slightly hard, very friable, sticky and plastic; many very fine tubular pores; few very fine salt crystals; few very fine dark brown (7.5YR 4/2) mottles; 20 to 30 percent hard nodules; few coarse lime masses on nodules; violently effervescent; strongly alkaline (pH 8.8).

Type location: Elko County, Nevada; approximately 10 miles northwest of Wendover; about 1,200 feet east and 2,000 feet south of the northwest corner of section 28, T.35 N., R.70 E.; (40 degrees, 53 minutes, 11 seconds north latitude and 114 degrees, 04 minutes, 15 seconds west longitude.)

Range in characteristics:

Soil moisture: Saturated with water during most of the year within a depth of 40 inches.

Control section:

Exchangeable sodium--15 to 70 percent.

Salt content--2 percent.

Clay content--20 to 35 percent.

Calcium carbonate equivalent--9 to 30.

Reaction--Moderately alkaline to very strongly alkaline throughout.

Az horizon:

Hue--10YR, 2.5Y, or 5Y.

Value--5 to 7 dry, 3 to 6 moist.

Chroma--1 to 3.

Conductivity--Saturation extract is greater than 16 and may exceed 200.

C horizon:

Hue--2.5Y, 5Y or N but includes some 7.5YR and 10YR.

Value--6 to 8 dry, 5 to 7 moist.

Chroma--1 to 3.

Texture--Silty clay loam or silt loam.

Clay content--20 to 35 percent.

Conductivity of saturation extract--Greater than 16.

Structure--Platy or massive.

Consistence--Slightly hard to hard, very friable to firm, slightly sticky to very sticky, and slightly plastic to very plastic.

Other features--There may be salt crystals and mottling in some pedons.

Schoer Series

The Schoer series consists of very deep, well drained soils that formed in mixed alluvium. Schoer soils are on fan piedmonts remnants. Slopes are 2 to 4 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Aridic Argixerolls

Typical pedon: Schoer loam, in an area of map unit 1780. (Colors are for dry soil unless otherwise noted.) The soil surface is covered with 5 percent pebbles.

A--0 to 3 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; dark gray (10YR 4/1)

organic coats on faces of peds; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, few fine and medium roots; many very fine tubular and interstitial pores; 10 percent pebbles; mildly alkaline (pH 7.7); abrupt smooth boundary.

Bt1--3 to 8 inches; dark gray (10YR 4/1) clay loam, very dark grayish brown (10YR 3/2) moist; strong fine prismatic structure; slightly hard, friable, sticky and plastic; many very fine, common fine and medium roots; many very fine tubular pores; few pressure faces; few moderately thick clay films on faces of peds and lining pores; 5 percent pebbles; mildly alkaline (pH 7.6); abrupt wavy boundary.

Bt2--8 to 16 inches; dark gray (10YR 4/1) clay, very dark gray (10YR 3/1) moist; strong coarse prismatic structure; hard, friable, very sticky and plastic; many very fine, few fine and medium roots; common very fine tubular pores; common pressure faces; common thin clay films on faces of peds and lining pores; 5 percent pebbles; mildly alkaline (pH 7.6); abrupt wavy boundary.

2Bt3--16 to 23 inches; light brownish gray (10YR 6/2) gravelly clay loam, dark grayish brown (10YR 4/2) moist; strong medium prismatic structure; hard, friable, very sticky and plastic; many very fine, few fine and medium roots; common very fine tubular pores; common pressure faces; common thin clay films on faces of peds and lining pores; 15 percent pebbles; mildly alkaline (pH 7.6); clear wavy boundary.

3Bt4--23 to 33 inches; pale brown (10YR 6/3) very gravelly sandy clay loam, brown (10YR 5/3) moist; massive; hard, friable, sticky and plastic; common very fine and few fine roots; common very fine tubular pores; few very thin clay films on faces of peds and lining pores; 40 percent pebbles; mildly alkaline (pH 7.7); clear wavy boundary.

4C--33 to 60 inches; light yellowish brown (10YR 6/4) very gravelly coarse sand, dark yellowish brown (10YR 4/4) moist; single grain; loose, nonsticky and nonplastic; common very fine and few fine roots; many very fine interstitial pores; 60 percent pebbles; mildly alkaline (pH 7.6).

Type location: Elko County, Nevada; approximately 7 miles south of Wells, Nevada; 200 feet north and 1,800 feet west of the southeast corner of section 8, T.36 N., R.62 E., (41 degrees, 00 minutes, 38 seconds north latitude and 114 degrees, 59 minutes, 20 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry summer and fall.

Soil temperature: 47 to 52 degrees F.

Mollic epipedon thickness: 10 to 17 inches.

Depth to 4C horizon: 30 to 40 inches.

Depth to argillic horizon: 3 to 10 inches.

Control section:

Clay content--35 to 45 percent.

Rock fragments--Averages 5 to 20 percent pebbles.

A horizon:

Value--4 or 5 dry.

Reaction--Neutral to mildly alkaline.

Bt horizons:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--1 through 3.

Texture--Clay loam or clay.

Clay content--35 to 45 percent.

Sand content--Less than 15 percent coarse and very coarse sand.

Consistence--Slightly hard or hard dry; very sticky or sticky wet.

Rock fragments--5 to 15 percent pebbles.

Reaction--Mildly alkaline to moderately alkaline.

2Bt horizon:

Value--5 or 6 dry, 4 or 5 moist.

Chroma--2 through 4.

Clay content--27 to 40.

Rock fragments--15 to 35 percent pebbles.

Structure--Prismatic or massive.

Reaction--Mildly alkaline to moderately alkaline.

Other features--Few fine filaments of lime are in lower subhorizons in some pedons.

3Bt horizon:

Value--5 or 6 dry, 4 or 5 moist.

Chroma--2 through 4.

Clay content--25 to 35 percent.

Rock fragments--35 to 40 percent.

Reaction--Mildly alkaline to moderately alkaline.

Other features--Few fine filaments of lime are present in some pedons.

4C horizon:

Texture--Loamy sand or coarse sand.

Clay content--2 to 8 percent.

Rock fragments--30 to 60 percent pebbles.

Structure--Massive or single grain.

Consistence--Slightly hard or loose.

Reaction--Mildly alkaline to moderately alkaline.

Secrepass Series

The Secrepass series consists of very deep, well drained soils that formed in mixed alluvium. Secrepass soils are on fan piedmont remnants. Slopes are 2 to 8 percent. The mean annual precipitation is about 18 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Typic Palexerolls

Typical pedon: Secrepass gravelly loam, in an area of map unit 1690. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 40 percent pebbles and 5 percent cobbles.

A1--0 to 3 inches; dark grayish brown (10YR 4/2) gravelly loam, very dark brown (10YR 2/2) moist; weak thick platy parting to moderate fine subangular blocky; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, few fine and medium roots; common very fine and few fine interstitial pores; 25 percent pebbles; neutral (pH 6.8); clear smooth boundary.

A2--3 to 7 inches; dark grayish brown (10YR 4/2) gravelly loam, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine, few medium and coarse roots; common very fine and few fine, medium and coarse interstitial and tubular pores; 15 percent pebbles; neutral (pH 6.8); abrupt smooth boundary.

Bt1--7 to 14 inches; brown (10YR 5/3) gravelly clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine and few fine and medium roots; many very fine and few fine and medium interstitial and tubular pores; common thin clay films on faces of peds and few thin lining pores; 25 percent pebbles and 5 percent cobbles; neutral (pH 6.6); abrupt smooth boundary.

2Bt2--14 to 23 inches; brown (10YR 5/3) very gravelly clay, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine and few fine and medium roots; many moderately thick clay films on faces of peds and lining pores; 30 percent pebbles and 10 percent cobbles; neutral (pH 6.8); clear smooth boundary.

2Bt3--23 to 31 inches; dark yellowish brown (10YR 4/6) very gravelly clay, dark yellowish brown (10YR 4/6) moist; strong coarse prismatic parting to coarse

angular blocky; hard, firm, very sticky and very plastic; few very fine to coarse roots; many very fine and few fine, medium and coarse tubular pores; many moderately thick clay films on faces of peds and lining pores; few pressure faces; 30 percent pebbles and 10 percent cobbles; slightly acid (pH 6.4); clear smooth boundary.

3C--31 to 60 inches; very pale brown (10YR 7/3) extremely gravelly sandy loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, very friable, slightly sticky and nonplastic; few very fine and fine roots; common very fine interstitial pores; 45 percent pebbles, 15 percent cobbles, and 5 percent stones; slightly acid (pH 6.4).

Type location: Elko County, Nevada; approximately 5 miles north of Arthur, Nevada; 600 feet south and 2,400 feet west of the northeast corner of section 3, T.34 N., R.60 E.; (40 degrees, 51 minutes, 48 seconds north latitude and 115 degrees, 11 minutes, 14 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually moist, moist in winter and spring, dry in late summer and fall.

Soil temperature: 44 to 47 degrees F.

Mollic epipedon thickness: 12 to 16 inches includes upper part of argillic horizon.

Depth to abrupt textural boundary: 7 to 10 inches.

Depth to base of argillic: 30 to 40 inches.

Reaction: Slightly acid or neutral.

Control section:

Clay content--Averages 35 to 50 percent.

Rock fragments--Averages 35 to 60 percent.

A horizons:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--2 or 3.

Bt horizon:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--2 or 3.

Texture--Gravelly clay loam, very gravelly clay loam.

Clay content--30 to 40 percent.

Rock fragments--25 to 40 percent gravel, 0 to 5 percent cobbles.

2Bt horizons:

Value--4 or 5 dry.

Chroma--3 through 6.

Texture--Clay.

Clay content--40 to 60 percent.

Rock fragments--25 to 45 percent gravel and 5 to 15 percent cobbles.

Structure--Prismatic or subangular blocky.

Consistence--Slightly hard or hard dry, friable or firm moist, sticky or very sticky and plastic or very plastic wet.

Other features--Black (10YR 2/1) organic stains on faces of peds and lining pores.

Segura Series

The Segura series consists of very shallow or shallow well drained soils that formed in residuum and colluvium from rhyolite, andesite and tuffs. Segura soils are on mountains. Slopes are 8 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 45 degrees F.

Taxonomic class: Loamy, mixed, frigid Lithic Argixerolls

Typical pedon: Segura very stony sandy clay loam located in an area of map unit 1030. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 20 percent pebbles, 5 percent cobbles, and 5 percent stones.

A--0 to 2 inches; grayish brown (10YR 5/2) very stony sandy clay loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine interstitial and tubular pores; 40 percent pebbles; 5 percent cobbles, and 5 percent stones; mildly alkaline (pH 7.6); abrupt smooth boundary.

Bt1--2 to 6 inches; grayish brown (10YR 5/2) gravelly clay loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and plastic; many very fine, few fine and medium roots; many very fine interstitial and tubular pores; few thin clay films on faces of peds and lining pores; 30 percent pebbles; mildly alkaline (pH 7.7); abrupt wavy boundary.

Bt2--6 to 11 inches; brown (10YR 5/3) gravelly clay loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; slightly hard, very friable, sticky and plastic; many very fine, few fine and medium roots; many very fine interstitial and tubular pores; few thin clay films on faces of peds and lining pores; 30 percent pebbles; mildly alkaline (pH 7.8); abrupt irregular boundary.

R--11 inches; rhyolite.

Type location: Elko County, Nevada; approximately 6 miles northeast of Currie in the Dolly Varden Mountains; located 200 feet south and 400 feet east of the projected northeast corner of section 32, T.29 N., R.66 E.; (40 degrees, 21 minutes, 07 seconds north

latitude and 114 degrees, 32 minutes, 34 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and early fall.

Soil temperature: 43 to 47 degrees F.

Mollic epipedon: 7 to 14 inches thick. Thin epipedons are mollic after mixing to 7 inches. Commonly includes part or all of Bt horizon.

Depth to bedrock: 7 to 14 inches.

Reaction: Neutral to moderately alkaline.

Control section:

Clay content--18 to 30 percent.

Rock fragments--Averages 10 to 35 percent.

A horizon:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--2 or 3.

Bt horizons:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--2 or 3.

Texture--Loam, sandy clay loam, or clay loam.

Structure--Angular blocky and subangular blocky.

Clay content--20 to 35 percent.

Rock fragments--10 to 35 percent.

Shabliss Series

The Shabliss series consists of shallow over a duripan, well drained soils that formed in mixed alluvium with a loess mantle high in volcanic ash. Shabliss soils are on fan piedmont remnants. Slopes are 2 to 8 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Loamy, mixed, mesic, shallow Haploxerollic Durorthids

Typical pedon: Shabliss gravelly fine sandy loam located in an area of map unit 700. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 10 percent pebbles.

A--0 to 2 inches; light brownish gray (10YR 6/2) gravelly fine sandy loam, dark grayish brown (10YR 4/2) moist; moderate thick platy structure; soft, very friable, slightly sticky and slightly plastic; few very fine roots; common very fine tubular and common very fine and few fine vesicular pores; 15 percent 2 to 5 millimeter pebbles;

violently effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary.

Bw--2 to 10 inches; pale brown (10YR 6/3) very fine sandy loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine roots; few very fine tubular pores; few thin lime coats on undersides of coarse fragments; 10 percent pebbles; strongly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary.

Bqk--10 to 15 inches; pale brown (10YR 6/3) very fine sandy loam, dark brown (10YR 4/3) moist; strong medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine, common fine, few medium and coarse roots; few very fine tubular pores; 15 percent 5 to 10 millimeter durinodes; common thin lime coats on undersides of coarse fragments; 10 percent pebbles; violently effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary.

Bqkm--15 to 31 inches; light yellowish brown (10YR 6/4) strongly cemented duripan, yellowish brown (10YR 5/4) moist; massive; very hard and very firm; few very fine and fine roots following fractures; common thin lime coats lining fractures; common thin lime seams; violently effervescent; clear smooth boundary.

2Bk--31 to 61 inches; light yellowish brown (10YR 6/4) very gravelly loamy sand, yellowish brown (10YR 5/4) moist; massive; slightly hard, very friable, nonsticky and nonplastic; 35 percent pebbles; strongly effervescent to noneffervescent with depth; moderately alkaline (pH 8.0).

Type location: Elko County, Nevada; approximately 20 miles northwest of Wendover, Nevada; about 150 feet north and 300 feet east of the southwest corner of section 8; T.35 N., R.68 E.; (40 degrees, 55 minutes, 16 seconds north latitude and 114 degrees, 19 minutes, 17 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist during winter and spring, dry summer through fall.

Soil temperature: 47 to 55 degrees F.

Depth to base of Bw horizon: 10 to 15 inches.

Depth to strongly cemented duripan: 10 to 20 inches.

Depth to bedrock: 60 inches or more.

Control section:

Clay content--5 to 15 percent.

Rock fragments--Averages 0 to 25 percent.

A horizon:

Value--5 or 6 dry, 3 or 4 moist.

Chroma--2 or 3.

Reaction--Neutral to moderately alkaline.

Other features--Some pedons have few fine soft pockets and films of lime and are violently effervescent.

Bw horizon:

Value--5 or 6 dry, 4 or 5 moist.

Chroma--2 through 4.

Texture--Very fine sandy loam, silt loam or loam with thin subhorizons with fine sandy loam in some pedons.

Consistence--Soft or slightly hard, very friable to friable, nonsticky to slightly sticky and nonplastic to slightly plastic.

Reaction--Neutral to strongly alkaline.

Other features--Some pedons have few fine soft films of lime that are effervescent in pockets.

Bqk horizon:

Cementation--5 to 45 percent durinodes in a friable or brittle matrix.

Texture--Very fine sandy loam, loam or silt loam, with fine sandy loam layers in some pedons.

Structure--Subangular blocky or massive.

Consistence--Slightly hard or hard dry; very friable or friable moist.

Bqkm horizon:

Structure--Platy or massive.

Consistence--Very hard or extremely hard.

Other features--In some pedons, 2 or more strongly cemented layers are interbedded with weakly cemented material.

Carbonates--Strongly effervescent to violently effervescent.

Bk horizon:

Clay content--0 to 10 percent.

Rock fragments--Some pedons are gravelly or very gravelly below the duripan.

Consistence--Soft to very hard, very friable to firm.

Reaction--Moderately alkaline to very strongly alkaline.

Shantown Series

The Shantown series consist of very deep, somewhat excessively drained soils that formed in re-worked granitic alluvium. Shantown soils are on beach plains and beach bars. Slopes are 0 to 8 percent. The mean annual

precipitation is about 8 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Coarse-loamy, mixed, mesic Aridic Haploxerolls

Typical pedon: Shantown gravelly loamy sand, in an area of map unit 1650. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 10 percent pebbles.

A1--0 to 2 inches; grayish brown (10YR 5/2) gravelly loamy sand, dark brown (10YR 3/3) moist; weak fine granular structure; slightly hard, very friable, nonsticky and nonplastic; many very fine roots; many very fine interstitial and vesicular pores; 15 percent pebbles; mildly alkaline (pH 7.6); abrupt smooth boundary.

A2--2 to 7 inches; grayish brown (10YR 5/2) coarse sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine roots; many very fine tubular pores; 10 percent pebbles; mildly alkaline (pH 7.6); abrupt wavy boundary.

A3--7 to 11 inches; brown (10YR 5/3) coarse sandy loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine roots; many very fine interstitial and tubular pores; 10 percent pebbles; mildly alkaline (pH 7.6); abrupt wavy boundary.

Bw1--11 to 15 inches; light yellowish brown (10YR 6/4) coarse sandy loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine roots; many very fine interstitial and tubular pores; 10 percent pebbles; mildly alkaline (pH 7.6); clear wavy boundary.

Bw2--15 to 25 inches; pale brown (10YR 6/3) coarse sandy loam, dark brown (10YR 3/3) moist; moderate coarse subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common very fine roots; many very fine interstitial and tubular pores; 10 percent pebbles; mildly alkaline (pH 7.6); clear wavy boundary.

C1--25 to 33 inches; pale brown (10YR 6/3) gravelly sandy loam, dark brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine roots; many very fine interstitial pores; 20 percent pebbles; mildly alkaline (pH 7.7); clear wavy boundary.

2C2--33 to 49 inches; very pale brown (10YR 7/3) gravelly sand, dark brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine roots; many very fine interstitial pores; few thin lime

coats on undersides of pebbles; 25 percent pebbles; mildly alkaline (pH 7.8); clear wavy boundary.

3Ck--49 to 60 inches; variegated extremely gravelly coarse sand; single grain; loose, nonsticky and nonplastic; few fine roots; many fine and medium interstitial pores; few thin lime coats on undersides of pebbles; 20 percent discontinuous weak lime cementation; 75 percent pebbles; strongly effervescent; moderately alkaline (pH 8.0).

Type location: Elko County, Nevada; approximately 9 miles northeast of the Ruby Marsh National Wildlife Refuge Headquarters; 100 feet south and 200 feet east of the northwest corner of section 23, T.28 N., R.58 E.; (40 degrees, 18 minutes, 00 seconds north latitude and 115 degrees, 24 minutes, 45 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry in summer and fall.

Soil temperature: 47 to 52 degrees F.

Mollic epipedon thickness: 10 to 15 inches.

Control section:

Clay content--Averages 8 to 12 percent.

Rock fragments--Averages 10 to 30 percent, dominantly 2 to 5 millimeter.

A horizons:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--2 or 3.

Reaction--Neutral or mildly alkaline.

Bw horizons:

Texture--Coarse sandy loam or sandy loam.

Clay content--8 to 12 percent.

Rock fragments--0 to 10 percent.

C1 horizon:

Texture--Coarse sandy loam or sandy loam.

Clay content--8 to 12 percent.

Rock fragments--15 to 35 percent.

2C2 horizon:

Texture--Sand, coarse sand, loamy coarse sand, or loamy sand.

Clay content--2 to 8 percent.

Rock fragments--5 to 30 percent.

Other features--Some pedons contain few thin lime coats on undersides of coarse fragments.

3Ck horizon:

Clay content--2 to 6 percent.

Rock fragments--50 to 80 percent.

Structure--Massive or single grain.
 Calcium carbonate equivalent--1 to 10 percent.
 SAR--0 to 5.
 Cementation--10 to 30 percent discontinuous weak lime cementation.
 Other features--Some pedons contain thin bands of gravelly loamy sand or coarse sand.

Sheffit Series

The Sheffit series consists of very deep, moderately well drained soils that formed in mixed alluvium over lacustrine sediments. Sheffit soils are on lake plains and alluvial flats. Slopes are 0 to 2 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 46 degrees F.

Taxonomic class: Fine, montmorillonitic (calcareous), mesic Xeric Torriorthents

Typical pedon: Sheffit fine sandy loam located in an area of map unit 582. (Colors are for dry soil unless otherwise noted.)

- A1--0 to 2 inches; gray (10YR 6/1) fine sandy loam, dark grayish brown (10YR 4/2) moist; weak thick platy structure; soft, very friable, nonsticky and slightly plastic; common fine, medium and few very fine roots; few very fine tubular pores; violently effervescent; moderately alkaline (pH 8.2); clear smooth boundary.
- A2--2 to 5 inches; light gray (10YR 7/2) fine sandy loam, dark grayish brown (10YR 4/2) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine and medium roots; few very fine tubular pores; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary.
- A3--5 to 10 inches; light gray (10YR 7/2) sandy loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine and medium roots; few very fine tubular pores; 10 percent durinodes; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary.
- Cn1--10 to 23 inches; light gray (5Y 7/1) silty clay, light olive gray (5Y 6/2) moist; strong fine medium subangular blocky structure; hard, friable, sticky and plastic; few very fine and fine roots; few very fine tubular pores; few fine salt crystals; 15 percent durinodes; violently effervescent; strongly alkaline (pH 9.0); clear smooth boundary.
- Cn2--23 to 36 inches; light gray (5Y 7/1) silty clay, light olive gray (5Y 6/2) moist; strong fine, medium prismatic

parting to very fine subangular blocky structure; hard, friable, sticky and plastic; few very fine and fine roots; few very fine tubular pores; few fine salt crystals; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary.

Cn1--36 to 50 inches; light gray (5Y 7/1) silty clay, light olive gray (5Y 6/2) moist; strong very fine, fine prismatic parting to angular blocky structure; hard, friable, sticky and plastic; few very fine and fine roots; few very fine tubular pores; few very fine manganese stains; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary.

Cn2--50 to 60 inches; light gray (5Y 7/1) silty clay loam, light olive gray (5Y 6/2) moist; moderate very fine angular blocky structure; slightly hard, friable, sticky and plastic; few very fine and fine roots; few very fine tubular pores; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

Type location: Elko County, Nevada; approximately 2,000 feet northwest of Flowery Lake; about 1,200 feet north and 200 feet west of the southeast corner of section 17, T.33 N., R.66 E.; (40 degrees, 43 minutes, 59 seconds north latitude and 114 degrees, 31 minutes, 46 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and early spring, dry late spring through fall.

Soil temperature: 48 to 52 degrees F.

Depth to lacustrine sediments: 10 to 30 inches.

Other features: Some pedons have very thin layers of fine sandy loam below 50 inches.

Control section:

Clay content--35 to 50 percent.

A horizons:

Value--6 through 8 dry, 4 through 6 moist.

Chroma--1 through 3.

SAR--Less than 12.

Other features--Influenced by pyroclastics, when moisture content close to saturated state, very sticky; in moist state, slightly sticky.

Cnz and Cn horizons:

Hue--2.5Y, 5Y, or 10YR.

Value--6 through 8 dry, 4 through 7 moist.

Chroma--1 through 3. Most pedons have a low chroma matrix or common, fine, faint low chroma mottles in the lower subhorizons.

Structure--Prismatic, angular blocky, subangular blocky or massive.

Texture--Stratified silt loam through clay

Consistence--Slightly hard or hard dry, very friable to firm moist, sticky or very sticky and plastic or very plastic wet.

Salinity--Commonly more than 8 millimhos per centimeter.

SAR--More than 20.

Other features--Some pedons have substrata with common black ped coatings and high chroma iron mottles.

Shuttle Series

The Shuttle series consists of very deep, well drained soils that formed in mixed alluvium. Shuttle soils are on fan skirts. Slopes are 2 to 8 percent. The mean annual precipitation is about 6 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Coarse-loamy, mixed (calcareous), mesic Durorthidic Torriorthents

Typical pedon: Shuttle silt loam is located in an area of map unit 340. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; light brownish gray (10YR 6/2) silt loam, brown (10YR 4/3) moist; weak thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine interstitial pores; 10 percent calcium carbonate equivalent; 5 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary.

A2--2 to 5 inches; light gray (10YR 7/2) silt loam; brown (10YR 5/3) moist; moderate thin platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine interstitial pores; 15 percent calcium carbonate equivalent; 5 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bk--5 to 15 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 5/3) moist; massive; soft, very friable, nonsticky and slightly plastic; many very fine and fine roots; many very fine interstitial pores; 15 percent calcium carbonate equivalent; 5 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bqk1--15 to 42 inches; very pale brown (10YR 7/3) silt loam, pale brown (10YR 6/3) moist; massive; hard, firm, nonsticky and nonplastic; few very fine and fine roots; common very fine tubular pores; 15 percent calcium carbonate equivalent; continuous brittle matrix;

10 percent pebbles; violently effervescent, moderately alkaline (pH 8.2); clear smooth boundary.

Bqk2--42 to 60 inches; very pale brown (10YR 7/3) stratified fine sandy loam to very gravelly sandy loam, pale brown (10YR 6/3) moist; massive; hard, friable, nonsticky and nonplastic; few very fine roots; many very fine interstitial pores; 15 percent 5 millimeter in diameter, brittle durinodes; 25 percent discontinuous brittle lenses; 20 percent calcium carbonate equivalent; 20 percent pebbles; violently effervescent; moderately alkaline (pH 8.2).

Type location: Elko County, Nevada; approximately 9 miles south of Montello about 2,000 feet east and 100 feet north of the southwest corner of section 14, T.38 N., R.69 E.; (41 degrees, 10 minutes, 08 seconds north latitude and 114 degrees, 08 minutes, 06 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry late May and through early November.

Soil temperature: 53 to 57 degrees F.

Depth to continuous brittle matrix: 10 to 20 inches.

Depth to Bqkm horizon: 40 to over 80 inches when present.

Control section:

Clay content--8 to 15 percent.

Rock fragments--5 to 15 percent, mainly pebbles

Calcium carbonate equivalent--10 to 25 percent

Reaction--Moderately alkaline or strongly alkaline.

Other features--The Bqkm horizon is absent in some pedons.

A horizons:

Hue--10YR or 2.5Y.

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 3.

Bk horizon:

Hue--10YR or 2.5Y.

Value--6 or 7 dry, 4 or 5 moist.

Chroma--3 or 4.

Clay content--8 to 18 percent.

Structure--Massive or weak subangular blocky.

Texture--Silt loam, very fine sandy loam or gravelly silt loam.

Bqk horizons:

Hue--10YR or 2.5Y.

Chroma--3 or 4.

Clay content--5 to 15 percent.

Cementation--Continuous weak brittle matrix are 7 to 15 inches thick. Discontinuous weak silica cemented subhorizons have up to 30 percent 5 to 15 millimeter durinodes.

Other features--Substratum of stratified fine sandy loam to very gravelly sandy loam is common in some pedons below 40 inches.

Simon Series

The Simon series consists of very deep, well drained soils that formed in mixed alluvium. Simon soils are on mountains. Slopes are 15 to 50 percent. The mean annual precipitation is about 11 inches and the mean annual temperature is about 44 degrees F.

Taxonomic class: Fine-loamy, mixed, frigid Aridic Argixerolls

Typical pedon: Simon loam located in an area of map unit 680. (Colors are for dry soil unless otherwise noted.)

A1--0 to 4 inches; dark grayish brown (10YR 4/2) loam, very dark gray (10YR 3/1) moist; strong medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine, few fine and medium tubular pores; 10 percent pebbles; neutral (pH 7.0); clear smooth boundary.

A2--4 to 10 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; strong medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, few fine and medium roots; common very fine tubular pores; few thin clay films coating mineral grains; 10 percent pebbles; neutral (pH 7.0); clear smooth boundary.

Bt1--10 to 15 inches; brown (10YR 5/3) gravelly clay loam, dark brown (10YR 3/3) moist; moderate very fine and fine angular blocky structure; hard, friable, sticky and plastic; few very fine and fine roots; common very fine, few fine and medium tubular pores; few thin clay films coating mineral grains and on faces of peds and lining pores; 20 percent pebbles and 5 percent cobbles; neutral (pH 7.3); clear smooth boundary.

2Bt2--15 to 47 inches; pale brown (10YR 6/3) cobbly clay loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; hard, friable, sticky and plastic; few very fine and fine roots; common very fine, few fine and medium tubular pores; few thin clay films coating mineral grains and lining tubular pores; 10

percent pebbles and 15 percent cobbles; neutral (pH 7.2); clear smooth boundary.

3Bt3--47 to 60 inches; pale brown (10YR 6/3) very gravelly clay loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; hard, friable, sticky and plastic; common very fine, few fine and medium tubular pores; few thin clay films coating mineral grains and lining tubular pores; 40 percent pebbles and 10 percent cobbles; neutral (pH 7.2); abrupt smooth boundary.

Type location: Elko County, Nevada; approximately 12 miles north of Silver Zone Pass; located in an unsectionized area 2,200 feet north and 2,000 feet west of the projected southeast corner of sec 7, T.36 N., R.68 E.; (41 degrees, 01 minute, 00 seconds north latitude and 114 degrees, 19 minutes, 16 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry; moist in winter and spring, dry mid-June through October.

Soil temperature: 45 to 47 degrees F.

Mollic epipedon thickness: 10 to 17 inches, may include upper part of the argillic horizon.

Combined thickness of A and Bt horizons: 40 to 60 inches.

Control section:

Clay content--20 to 35 percent.

Rock fragments--0 to 25 percent, predominantly pebbles.

Reaction--Slightly acid or neutral.

A horizons:

Chroma--1 through 3.

Bt horizon:

Value--4 through 6 dry, 3 or 4 moist.

Chroma--2 through 4.

Texture--Loam or clay loam.

Consistence--Hard to very hard.

Rock fragments--0 to 25 percent.

Clay content--18 to 35 percent.

Structure--Weak or moderate, very fine, fine or medium subangular blocky or angular blocky or prismatic.

Reaction--Slightly acid or neutral.

2Bt horizon:

Value--5 or 6 dry, 3 or 4 moist.

Chroma--3 or 4.

Texture--Clay or clay loam.

Consistence--Hard or very hard, sticky or very sticky and plastic or very plastic wet.

Clay content--35 to 45 percent.

Rock fragments--15 to 35 percent. Dominantly cobbles.

Reaction--Slightly acid or neutral.

3Bt horizon:

Value--5 or 6 dry, 3 or 4 moist.

Chroma--3 or 4.

Texture--Loam, clay loam, or sandy clay loam.

Consistence--Hard or very hard dry.

Clay content--20 to 35 percent.

Rock fragments--0 to 60 percent.

Slipback Series

The Slipback series consists of very deep, well drained soils that formed in alluvium derived mainly from granite. Slipback soils are on fan piedmont remnants and alluvial flats. Slopes are 0 to 2 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 51 degrees F.

Taxonomic class: Fine-loamy, mixed, mesic Xerollic Natrargids

Typical pedon: Slipback sandy loam located in an area of map unit 1740. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; gray (10YR 6/1) sandy loam, dark gray (10YR 4/1) moist; moderate thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, fine and few medium roots; many very fine and fine interstitial and common fine tubular pores; 10 percent pebbles; moderately alkaline (pH 8.4); abrupt smooth boundary.

A2--2 to 7 inches; light brownish gray (10YR 6/2) sandy loam, very dark grayish brown (10YR 3/2) moist; strong thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, few fine and medium roots; many very fine interstitial and fine tubular pores; 10 percent pebbles; moderately alkaline (pH 8.4); abrupt smooth boundary.

A3--7 to 12 inches; light gray (10YR 7/2) sandy loam, dark grayish brown (10YR 4/2) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine and few medium roots; many very fine, fine and few medium tubular pores; 10 percent pebbles; moderately alkaline (pH 8.4); abrupt wavy boundary.

Btnk1--12 to 20 inches; grayish brown (2.5Y 5/2) gravelly sandy clay loam, dark grayish brown (2.5Y 4/2) moist; strong medium prismatic structure; hard, friable, sticky and plastic; few very fine, fine and medium roots; many very fine and fine tubular pores; many thin clay films on faces of peds and lining pores; common fine and medium soft masses of lime; 30 percent pebbles;

violently effervescent; strongly alkaline (pH 9.0); clear wavy boundary.

Btnk2--20 to 39 inches; light brownish gray (2.5Y 6/2) gravelly sandy clay loam, grayish brown (2.5Y 5/2) moist; weak coarse subangular blocky structure; hard, friable, sticky and plastic; few very fine and fine roots; many very fine, fine, and few medium tubular pores; few thin clay films on faces of peds and lining pores; many fine filaments and common fine and medium soft masses of lime; 30 percent pebbles; violently effervescent; strongly alkaline (pH 9.0); clear wavy boundary.

Bky--39 to 55 inches; light yellowish brown (2.5Y 6/4) gravelly sandy loam, olive brown (2.5Y 4/4) moist; massive; hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; many very fine, fine and few medium tubular pores; common fine filaments and few fine and medium soft masses of lime; few fine soft masses of gypsum; 25 percent pebbles; strongly effervescent; strongly alkaline (pH 9.0); abrupt wavy boundary.

2Cy--55 to 60 inches; pale brown (10YR 6/3) very gravelly loamy coarse sand, dark brown (10YR 4/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; many very fine and fine interstitial pores; few soft masses of gypsum; common fine and medium distinct light yellowish brown (10YR 6/4) mottles; 50 percent pebbles; moderately alkaline (pH 8.2).

Type location: Elko County, Nevada; approximately 5 miles north of the Warm Creek Ranch 2,200 feet north and 1,400 feet east of the southwest corner of section 18, T.34 N., R.62 E.; (40 degrees, 49 minutes, 39 seconds north latitude and 115 degrees, 01 minute, 14 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist in winter and early spring, dry from June through November.

Soil temperature: 53 to 57 degrees F.

Depth to carbonates: 12 to 25 inches.

Depth to the base of the natric horizon: 20 to 40 inches.

A horizons:

Value--5 through 7 dry, 3 through 5 moist.

Chroma--1 through 3.

Btn horizons:

Hue--10YR or 2.5Y.

Value--4 through 6 dry, and 4 or 5 moist.

Chroma--2 through 4.

Texture--Clay loam, sandy clay loam, loam.

Clay content--25 to 35 percent.

Rock fragments--5 to 30 percent, mainly fine gravel.
 Structure--Prismatic or subangular blocky with some subhorizon that are prismatic.
 Consistence--Slightly hard or hard dry and very friable through firm moist, slightly sticky or sticky and plastic or very plastic wet.
 Reaction--Moderately alkaline or strongly alkaline, usually increasing with depth.
 SAR--Btn and Btnk horizons range from 13 to 45.
 Effervescence--Typically noneffervescent in the upper part and slightly effervescent or violently effervescent in the lower part. Some pedons are violently effervescent in all parts.

Bk horizon:

Hue--10YR or 2.5Y.
 Value--5 through 7 dry, and 4 or 5 moist.
 Chroma--3 or 4.
 Texture--Coarse sandy loam or sandy loam.
 Clay content--3 to 8 percent.
 Rock fragments--5 to 25 percent mainly fine pebbles.
 Consistence--Slightly hard or hard dry and very friable or friable moist.
 Reaction--Moderately alkaline or strongly alkaline.
 Other features--In some pedons there are subhorizons with up to 10 percent durinodes in a friable matrix.

2C horizon:

Hue--10YR or 2.5Y.
 Value--5 through 7 dry, 4 through 6 moist.
 Chroma--3 or 4.
 Texture--Loamy coarse sand, sand, coarse sand.
 Clay content--2 to 6 percent.
 Rock fragments--5 to 15 percent, mainly fine pebbles.
 Some pedons have up to 50 percent pebbles.
 Structure--Horizon is massive or single grain.
 Consistence--Loose, soft or slightly hard, dry and loose or very friable moist.
 Reaction--Moderately alkaline or strongly alkaline.
 Other features--In some pedons these horizons are not present within a depth of 50 inches.

Smaug Series

The Smaug series consists of very deep, well drained soils that formed in silty lacustrine lake sediments influenced by loess. Smaug soils are on lake plain terraces. Slopes are 2 to 4 percent. The mean annual precipitation is about 7

inches and the mean annual temperature is about 50 degrees F.

Taxonomic class: Coarse-silty, mixed (calcareous), mesic Typic Torriorthents

Typical pedon: Smaug fine sandy loam located in an area of map unit 1522. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 5 percent pebbles.

- A1--0 to 2 inches; light gray (10YR 7/2) fine sandy loam, brown (10YR 5/3) moist; moderate thin platy structure; soft, very friable, slightly sticky and nonplastic; few very fine roots; many very fine interstitial and common very fine vesicular pores; common ostracod shell fragments; 5 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.
- A2--2 to 13 inches; light gray (10YR 7/2) fine sandy loam, brown (10YR 5/3) moist; weak coarse subangular blocky structure; soft, very friable, slightly sticky and nonplastic; many very fine, common fine, medium and few coarse roots; many very fine interstitial and few very fine tubular pores; common ostracod shell fragments; 5 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary.
- 2C1--13 to 19 inches; white (2.5Y 8/2) silt loam, light yellowish brown (2.5Y 6/4) moist; weak thick platy structure; soft, very friable, slightly sticky and nonplastic; common very fine, fine, few medium and coarse roots; many very fine interstitial and few very fine tubular pores; common ostracod shell fragments; 5 percent pebbles; violently effervescent; strongly alkaline (pH 9.0); abrupt smooth boundary.
- 2C2--19 to 29 inches; white (2.5Y 8/2) silt loam, light brownish gray (2.5Y 6/2) moist; moderate thin platy structure; slightly hard, very friable, slightly sticky and nonplastic; many very fine interstitial and few very fine tubular pores; common ostracod shell fragments; 5 percent pebbles; violently effervescent; strongly alkaline (pH 9.0); abrupt smooth boundary.
- 3C--29 to 60 inches; white (2.5Y 8/2) silt loam, light gray (2.5Y 7/2) moist; strong thin platy structure; slightly hard, very friable, slightly sticky and nonplastic; few very fine tubular pores; common ostracod shell fragments; violently effervescent; strongly alkaline (pH 9.0).

Type location: Elko County, Nevada; approximately 8 miles southeast of the Dead Cedar Mine in the Ferguson Flats; about 600 feet north and 100 feet west of the southeast corner of section 21, T.29 N., R.70 E.;

(40 degrees, 21 minutes, 52 seconds north latitude and 114 degrees, 04 minutes, 07 seconds west longitude.)

Range in characteristics:

Soil moisture: Dry in summer and fall, moist for short periods in winter and spring.

Soil temperature: 54 to 59 degrees F.

CaCO₃ equivalent: 15 to 30 mixed; subhorizons vary from less than 5 to 50 percent; no pedogenic accumulation.

Control section:

Clay content--10 to 18 percent.

Sand fraction--Less than 15 percent fine sand and coarser.

A horizons:

Hue--10YR or 2.5Y.

Value--6 or 7 dry, 4 through 6 moist.

Chroma--2 or 3.

Reaction--Moderately alkaline to strongly alkaline.

Effervescence--Strongly effervescent to violently effervescent.

C horizons:

Hue--10YR or 2.5Y.

Value--7 or 8 dry, 5 through 7 moist.

Chroma--2 through 4.

Texture--Very fine sandy loam or silt loam

Structure--Weak to strong, thin to thick platy.

Consistence--Soft to hard dry, friable to very friable, moist, slightly sticky to sticky and nonplastic to slightly plastic wet.

Reaction--Moderately alkaline to very strongly alkaline.

Sodhouse Series

The Sodhouse series consists of shallow over a duripan, well-drained soils that formed in mixed alluvium with a component of loess and ash. Sodhouse soils are on fan piedmont remnants. Slopes are 2 to 8 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Loamy, mixed, mesic, shallow Typic Durorthids

Typical pedon: Sodhouse gravelly loam located in an area of map unit 496. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 20 percent pebbles.

A1--0 to 2 inches; light brownish gray (10YR 6/2) gravelly loam, dark grayish brown (10YR 4/2) moist; moderate thick platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, few fine and medium roots; many very fine and fine interstitial and vesicular pores; few thin lime coats on undersides of pebbles; 30 percent pebbles; slightly effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary.

A2--2 to 8 inches; light brownish gray (10YR 6/2) gravelly loam, brown (10YR 5/3) moist; moderate coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, common fine and medium roots; many very fine tubular pores; few thin lime coats on undersides of pebbles; 25 percent pebbles; slightly effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

Bw1--8 to 13 inches; very pale brown (10YR 7/3) gravelly loam, yellowish brown (10YR 5/4) moist; weak coarse subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine, common fine and medium roots; many very fine tubular pores; common thin lime coats on undersides of pebbles; 25 percent pebbles; strongly effervescent; strongly alkaline (pH 8.8); clear wavy boundary.

Bw2--13 to 16 inches; very pale brown (10YR 7/3) gravelly loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine, few fine and medium roots; many very fine tubular pores; common thin lime coats on undersides of pebbles; 30 percent pebbles; strongly effervescent; strongly alkaline (pH 9.0); clear wavy boundary.

2Bqkm--16 to 60 inches; white (10YR 8/2) indurated duripan, light gray (10YR 7/2) moist; massive; extremely hard, extremely firm, few very fine roots; violently effervescent.

Type location: Elko County, Nevada; approximately 2.25 miles southeast of Tobar; about 1,000 feet north and 100 feet east of the projected southwest corner of section 22, T.35 N., R.63 E.; (40 degrees, 53 minutes, 48 seconds north latitude and 114 degrees, 51 minutes, 05 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist for short periods in winter and spring, dry from June through November.

Soil temperature: 47 to 53 degrees F.

Depth to indurated duripan: 14 to 20 inches.

Thickness of duripan: 6 to 44 inches.

Depth to 2Bk or 2Bqk horizon: 25 to 44 inches.

Reaction: Moderately alkaline or strongly alkaline usually increasing with depth.

Other features: Durinodes and lime accumulations are common in subhorizons immediately above the duripan of some pedons.

Control section:

Clay content--8 to 15 percent.

A horizon:

Hue--10YR or 2.5Y.

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 3.

Other features--Normally noneffervescent, but some pedons are slightly effervescent due to lime recharge from dust.

Bw horizon:

Hue--10YR or 2.5Y.

Value--6 or 7 dry, 4 or 5 moist.

Chroma--3 or 4.

Texture--Very fine sandy loam, fine sandy loam, silt loam, loam or gravelly loam.

Consistence--Slightly hard or hard dry, very friable to firm moist.

Rock fragments--5 to 35 percent, mainly pebbles.

Bqkm horizon:

Hue--10YR or 2.5Y.

Value--6 through 8 dry, 4 through 7 moist.

Chroma--2 through 4.

Structure--Platy or is massive.

Sonoma Series

The Sonoma series consists of very deep, poorly drained soils that formed in mixed silty alluvium with a component of loess high in ash. Sonoma soils are on floodplains and fluvial areas. Slopes are 0 to 2 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 50 degrees F.

Taxonomic class: Fine-silty, mixed (calcareous), mesic Aeric Fluvaquents

Typical pedon: Sonoma silty clay loam located in an area of map unit 1620. (Colors are for dry soil unless otherwise noted.).

A--0 to 3 inches; gray (10YR 6/1) silty clay loam, dark grayish brown (10YR 4/2) moist; moderate thick platy structure; slightly hard, very friable, sticky and plastic; many very fine, common fine and medium roots; many very fine vesicular and interstitial pores; violently

effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary.

AC--3 to 6 inches; light brownish gray (10YR 6/2) silty clay loam, dark grayish brown (10YR 4/2) moist; moderately thick platy structure parting to moderately thin platy structure; slightly hard, very friable, sticky and plastic; many very fine, common fine and medium roots; many very fine tubular and many very fine interstitial pores; violently effervescent; strongly alkaline (pH 8.8); abrupt smooth boundary.

C1--6 to 15 inches; white (10YR 8/2) silt loam, pale brown (10YR 6/3) moist; weak thin platy structure; slightly hard, very friable, sticky and slightly plastic; many very fine roots; many very fine tubular pores; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary.

C2--15 to 24 inches; white (10YR 8/1) silt loam, light olive gray (10YR 6/2) moist; massive; slightly hard, friable, sticky and plastic; common very fine roots; many very fine tubular and common fine tubular pores; few fine distinct yellowish brown (10YR 5/6) iron mottles; violently effervescent; strongly alkaline (pH 8.8); clear wavy boundary.

Ab--24 to 35 inches; pale yellow (5Y 7/3) silty clay loam, olive (5Y 4/3) moist; strong very coarse prismatic structure; hard, firm, very sticky and plastic; few very fine roots; many very fine tubular pores; violently effervescent; strongly alkaline (pH 8.7); clear wavy boundary.

C3--35 to 48 inches; white (5Y 8/1) silty clay loam, light olive gray (5Y 6/2) moist; strong very coarse prismatic structure; hard, firm, very sticky and plastic; few very fine roots; many very fine tubular pores; few fine and medium lime concretions; violently effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

C4--48 to 60 inches; white (5Y 8/1) silty clay, light olive gray (5Y 6/2) moist; massive; hard, firm, very sticky and plastic; many very fine tubular pores; common fine dark brown (7.5YR 4/4) mottles; violently effervescent; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; approximately 18 miles southeast of Wells; about 900 feet south and 2,200 feet east of the northwest corner of section 2, T.35 N., R.64 E.; (40 degrees, 56 minutes, 58 seconds north latitude and 114 degrees, 42 minutes, 50 seconds west longitude.)

Range in characteristics:

Soil moisture: Saturated and aquic conditions during spring and early summer with the water table at depths below

40 inches during the remainder of the year, unless drained.

Soil temperature: 49 to 53 degrees F.

Depth to buried A horizon: 24 to 55 inches.

Carbonates: Calcium carbonate equivalent is 3 to 12 percent throughout the profile and is strongly effervescent or violently effervescent.

Control section:

Clay content--25 to 35 percent.

A and AC horizons:

Hue--2.5Y or 10YR.

Value--5 or 6 dry, 3 through 5 moist; is not darker than 5.5 dry and 3.5 moist when the upper 2 inches are mixed.

Chroma--1 or 2.

Reaction--Moderately alkaline to very strongly alkaline; buried A horizons are moderately alkaline or strongly alkaline.

Ab and C horizons:

Hue--10YR through 5Y.

Value--6 through 8 dry, 3 through 6 moist.

Chroma--1 or 2. Subhorizons in some pedons have chroma of 3 or 4.

Structure--Platy, prismatic, granular, subangular blocky or is massive.

Consistence--Slightly hard through very hard dry, friable to firm moist; slightly sticky to very sticky; slightly plastic to very plastic wet.

Texture--Stratified silt to silty clay loam with strata of clay or silty clay in some pedons.

Reaction--Moderately alkaline to very strongly alkaline.

Other features--Fresh-water crustacean shells and 1/4 to 1/2 inch diameter lime concretions in most pedons. Few soft masses of lime.

Stampede Series

The Stampede series consists of moderately deep to an indurated duripan well drained soils that formed in mixed alluvium. Stampede soils are on fan piedmont remnants. Slopes are 2 to 8 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Fine, montmorillonitic, frigid Aridic Durixerolls

Typical pedon: Stampede gravelly loam is located in Elko County, Nevada, Central Part map unit 456. (Colors are

for dry soils unless otherwise noted.) The soil surface is partially covered with 15 percent pebbles.

A1--0 to 3 inches; brown (10YR 5/3) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, fine, and few medium roots; many very fine tubular and many very fine interstitial pores; 20 percent pebbles; neutral (pH 7.2); abrupt wavy boundary.

A2--3 to 7 inches; brown (10YR 5/3) gravelly loam, very dark grayish brown (10YR 3/2) moist; strong fine and medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, fine, and common medium roots; few very fine tubular and many very fine interstitial pores; 20 percent pebbles; neutral (pH 6.8); abrupt wavy boundary.

A3--7 to 11 inches; brown (10YR 5/3) gravelly clay loam, dark brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, friable, sticky and plastic; common very fine, fine medium and few coarse roots; many very fine tubular and common very fine interstitial pores; few thin clay films on faces of peds and bridging mineral grains, 15 percent pebbles; neutral (pH 6.8); clear wavy boundary.

Bt1--11 to 17 inches; yellowish brown (10YR 5/4) clay, dark brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, friable, very sticky and very plastic; many very fine, fine, medium and few coarse roots; many very fine tubular pores; many thick clay films on faces of peds and lining pores; 10 percent pebbles; neutral (pH 6.8); clear wavy boundary.

Bt2--17 to 27 inches; dark yellowish brown (10YR 4/4) clay, dark yellowish brown (10YR 4/4) moist; few dark grayish brown (10YR 4/2) organic stains on faces of peds; strong coarse prismatic structure; very hard, very firm, very sticky and very plastic; common very fine, few fine and medium roots; few very fine tubular pores; continuous, prominent pressure faces; 10 percent pebbles; neutral (pH 6.8); clear wavy boundary.

Bt3--27 to 35 inches; yellowish brown (10YR 5/4) gravelly clay, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse subangular blocky structure; hard, firm, very sticky and very plastic; few very fine and fine roots; many very fine and few fine tubular pores; many moderate thick clay films on faces of peds and lining pores; few very fine pores are lined with silica; 15 percent pebbles; neutral (pH 7.0); abrupt wavy boundary.

Bqkm--35 to 45 inches; pale brown (10YR 6/3) indurated duripan, dark yellowish brown (10YR 4/4) moist; very

hard, very firm and brittle; continuous 1 millimeter thick silica laminar cap at upper surface and continuous strong lime filaments; 60 percent pebbles; noneffervescent in matrix, strongly effervescent in lime filaments; mildly alkaline (pH 7.4).

Type location: Elko County, Nevada; approximately 44 miles north of Elko; about 2,200 feet west and 2,850 feet north of the southeast corner of section 4, T.40 N., R.54 E.; (41 degrees, 23 minutes, 13 seconds north latitude and 115 degrees, 53 minutes, 48 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist in winter and spring; dry July to October.

Soil temperature: 44 to 47 degrees F.

Depth to duripan: 20 to 37 inches.

Mollic epipedon thickness: 7 to 13 inches, may include upper part of Bt horizon of some pedons.

Control section:

Clay content--40 to 55 percent.

Rock fragments--0 to 10 percent pebbles.

A horizons:

Value--4 or 5 dry, 2 or 3 moist. (6 dry and 4 moist common in the lower subhorizon).

Chroma--2 or 3.

Reaction--Slightly acid or neutral.

Bt horizons:

Hue--10YR or 7.5YR.

Value--4 through 6 dry, 3 through 5 moist.

Chroma--2 through 4.

Rock fragments--Up to 15 percent in any one horizon.

Structure--Moderate or strong medium or coarse prismatic or fine to coarse subangular or angular blocky.

Reaction--Neutral to moderately alkaline.

Bqkm horizon:

Reaction--Mildly alkaline or moderately alkaline.

Other features--Noneffervescent to strongly effervescent in the matrix but contains few to many lime coatings on the surface or in fractures.

Stewval Series

The Stewval series consists of very shallow and shallow, well drained soils that formed in residuum and colluvium from andesite. Stewval soils are on hills. Slopes are 8 to 30 percent. The mean annual precipitation is about 9

inches and the mean annual temperature is about 51 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Lithic Xerollic Haplargids

Typical pedon: Stewval very gravelly fine sandy loam located in an area of map unit 80. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with approximately 60 percent pebbles and 10 percent flagstones.

A--0 to 2 inches; light brownish gray (10YR 6/2) very gravelly fine sandy loam, dark grayish brown (10YR 4/2) moist; moderate coarse platy structure; slightly hard, very friable, nonsticky and slightly plastic; few very fine roots; many very fine and fine vesicular pores; 50 percent pebbles and 5 percent flagstones; slightly effervescent; mildly alkaline (pH 7.8); abrupt smooth boundary.

Bt--2 to 6 inches; light brownish gray (10YR 6/2) very gravelly loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine and medium roots; many very fine and fine vesicular pores; 35 percent pebbles and 5 percent flagstones; few thin clay films on faces of peds and lining pores; few thin lime coats on sides and bottom of rock fragments; strongly effervescent; mildly alkaline (pH 7.8); abrupt wavy boundary.

R--6 inches; fractured andesite bedrock; diagonally oriented flagstones with up to 2 millimeter thick lime coats on undersides.

Type location: Elko County, Nevada; approximately 5 miles southeast of Currie in the Currie Hills, about 1,800 feet north and 2,300 feet east of the southwest corner of section 1, T.27 N, R.64 E.; (40 degrees, 14 minutes, 35 seconds north latitude and 114 degrees, 42 minutes, 17 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring months, dry in summer and fall except for 10 to 20 days cumulative between July and October due to convection storms.

Soil temperature: 53 to 59 degrees F.

Depth to bedrock: 4 to 14 inches.

Carbonates: Slightly effervescent to violently effervescent.

Reaction: Mildly alkaline or moderately alkaline.

Control section:

Clay content--18 to 27 percent.

Rock fragments--35 to 70 percent pebbles, 0 to 10 percent cobbles, 0 to 15 percent stones. Some pedons have 0 to 5 percent flagstones.

A horizon:

Hue--10YR or 7.5YR.

Value--5 or 6 dry, 3 or 4 moist.

Chroma--2 or 3.

Bt horizon:

Hue--10YR or 7.5YR or 5YR.

Value--5 or 6 dry, 3 through 5 moist.

Chroma--2 through 4.

Texture--(Less than 2 millimeter fraction) Loam or clay loam.

Structure--Subangular blocky or granular.

Consistence--Soft or slightly hard.

Other features--Silica and lime pendants are present on rock fragments in some pedons.

medium subangular blocky structure; slightly hard, very friable, sticky and plastic; common very fine, fine and few medium roots; many very fine, fine and few medium tubular pores; 50 percent pebbles and 5 percent cobbles; common moderately thick clay films on faces of peds and lining pores; mildly alkaline (pH 7.4); clear smooth boundary.

Bt2--15 to 23 inches; pale brown (10YR 6/3) very gravelly clay loam, dark brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, friable, sticky and plastic; common very fine and fine roots; many very fine and fine tubular pores; 45 percent pebbles and 10 percent cobbles; common moderately thick clay films on faces of peds and lining pores; mildly alkaline (pH 7.4); abrupt smooth boundary.

R--23 inches; conglomerate bedrock.

Sumine Series

The Sumine series consists of moderately deep, well drained soils that formed in residuum and colluvium from sandstone and conglomerate. Sumine soils are on mountains. Slopes are 30 to 75 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Loamy-skeletal, mixed, frigid Aridic Argixerolls

Typical pedon: Sumine very gravelly loam in an area of map unit 400. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 50 percent pebbles and 10 percent cobbles.

A1--0 to 3 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine and common medium roots; many very fine tubular and common very fine interstitial pores; 45 percent pebbles; neutral (pH 6.6); abrupt smooth boundary.

A2--3 to 9 inches; grayish brown (10YR 5/2) very gravelly loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure parting to moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine and common medium roots; many very fine and fine tubular pores; 50 percent pebbles and 5 percent cobbles; mildly alkaline (pH 7.4); abrupt smooth boundary.

Bt1--9 to 15 inches; brown (10YR 5/3) very gravelly clay loam, dark brown (10YR 3/3) moist; moderate fine and

Type location: Elko County, Nevada; about 21 miles east of Wells, Nevada; approximately 2,000 feet north and 2,000 feet east of the southwest corner of section 1, T.37 N., R.65 E.; (41 degrees, 07 minutes, 00 seconds north latitude and 114 degrees, 34 minutes, 30 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in the winter and spring, dry from early July through mid-October.

Soil temperature: 42 to 47 degrees F.

Mollic epipedon thickness: 8 to 17 inches thick.

Depth to bedrock (lithic contact): 20 to 40 inches.

Combined thickness of the A and Bt horizons: 20 to 40 inches.

Reaction: Neutral or mildly alkaline.

Control section:

Clay content--25 to 35 percent, when mixed.

Rock fragments--35 to 60 percent, when averaged.

A horizons:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--2 or 3.

Bt horizons:

Hue--10YR or 7.5YR.

Value--4 through 6 dry, 2 through 4 moist.

Chroma--2 through 4.

Consistence--Soft to hard dry, very friable to firm moist, sticky or very sticky and plastic or very plastic wet.

Structure--Weak or moderate, very fine to medium angular or subangular blocky structure. The lower Bt horizons may be massive.

Sycomat Series

The Sycomat series consists of very deep, well drained soils that formed in mixed alluvium. Sycomat soils are on beach plains and fan skirts. Slopes are 0 to 4 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Coarse-loamy, mixed, mesic Duric Calciorthids

Typical pedon: Sycomat sandy loam located in an area of map unit 540. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 15 percent pebbles.

A--0 to 5 inches; pale brown (10YR 6/3) sandy loam, dark brown (10YR 4/3) moist; moderate thick platy structure; slightly hard, very friable, nonsticky and nonplastic; many very fine, common fine, few medium and coarse roots; many very fine and few fine vesicular pores; 10 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

Bk--5 to 11 inches; light yellowish brown (10YR 6/4) gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine, fine, few medium, and coarse roots; common very fine tubular pores; 15 percent pebbles; common thin lime coats on undersides of pebbles; violently effervescent; strongly alkaline (pH 8.5); clear smooth boundary.

Bqk1--11 to 21 inches; very pale brown (10YR 7/3) gravelly loam, light yellowish brown (10YR 6/4) moist; massive; hard, firm and brittle, nonsticky and nonplastic; common very fine roots; common very fine tubular pores; continuous brittle matrix; 25 percent pebbles; common moderately thick lime and silica coats on pebbles; violently effervescent; very strongly alkaline (pH 9.4); clear smooth boundary.

Bqk2--21 to 48 inches; very pale brown (10YR 7/3) gravelly sandy loam, yellowish brown (10YR 5/4) moist; massive; hard, firm and brittle, nonsticky and nonplastic; few very fine roots; few very fine tubular pores; continuous brittle matrix; 20 percent pebbles and 5 percent cobbles; common thin lime and silica coats on rock fragments; violently effervescent; very strongly alkaline (pH 9.4); clear smooth boundary.

2C--48 to 60 inches; very pale brown (10YR 7/3) very gravelly loamy sand, light yellowish brown (10YR 6/4) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine roots; common very fine and few fine tubular pores; 35 percent pebbles; few thin

lime coats on undersides of pebbles; violently effervescent; strongly alkaline (pH 8.9).

Type location: Elko County, Nevada; approximately 3 miles southwest of Currie; about 4,000 feet north and 2,600 feet east of the southwest corner of section 4, T.27 N., R.64 E.; (40 degrees, 14 minutes, 57 seconds north latitude and 114 degrees, 45 minutes, 37 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in some part for short periods during winter and early spring and for 10 to 20 days cumulative between July and October following convection storms.

Soil temperature: 47 to 53 degrees F.

Depth to calcic horizon: 2 to 6 inches.

Depth to continuous brittle matrix: 10 to 23 inches.

Effervescence: Strongly effervescent to violently effervescent.

Control section:

Clay content--5 to 18 percent.

Rock fragments--0 to 35 percent.

Calcium carbonate equivalent--(Less than 20 millimeter fraction) 15 to 30 percent.

A horizon:

Value--5 or 6 dry, 4 or 5 moist.

Chroma--2 or 3.

Bk horizon:

Value--6 or 7 dry, 4 through 6 moist.

Chroma--3 or 4.

Clay content--5 to 18 percent.

Texture--Sandy loam, loam, or silt loam.

Rock fragments--0 to 35 percent.

Structure--Weak to moderate subangular blocky.

Reaction--Moderately alkaline to very strongly alkaline.

Consistence--Very friable or friable, moist; nonsticky or slightly sticky, nonplastic or slightly plastic, wet.

Effervescence--Strongly effervescent or violently effervescent.

Other features--Lime cemented soil masses may be absent in some pedons.

Bqk horizons:

Hue--10YR or 7.5YR.

Value--6 through 8 dry, 4 through 6 moist.

Chroma--2 through 4.

Texture--Coarse sandy loam, sandy loam, or loam.

Clay content--5 to 18 percent.

Rock fragments--0 to 35 percent.

Structure--Medium or coarse; platy, subangular blocky or platy or is massive.

Consistence--Slightly hard or hard, dry; slightly brittle or brittle moist; nonsticky or slightly sticky and nonplastic or slightly plastic, wet.

Reaction--Moderately alkaline to very strongly alkaline.

Other features--Discontinuous weak silica and lime cementation with 20 to 80 percent weakly to strongly cemented plates and durinodes.

2C horizon:

Hue--10YR or 7.5YR.

Value--6 or 7 dry, 4 through 6 moist.

Chroma--2 through 4.

Texture (less than 2 millimeter fraction)--Stratified sandy loam through sand, averages loamy sand or sand.

Clay content--2 to 5 percent.

Rock fragments--Averages 35 to 60 percent, mainly pebbles.

Structure--Massive or single grain.

Consistence--Loose to soft, slightly hard dry and loose to friable moist.

medium and coarse roots; many very fine interstitial pores; 45 percent pebbles; 1 to 2 millimeter thick lime coats and pendants on undersides of pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.

Bk2--9 to 12 inches; very pale brown (10YR 7/3) very gravelly loam, brown (10YR 5/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, fine, few medium and coarse roots; many very fine interstitial and common fine tubular pores; 5 percent 0.5 inch diameter hard and brittle durinodes; 55 percent pebbles; 1 to 2 millimeter thick lime coats and pendants on undersides of pebbles; violently effervescent; strongly alkaline (pH 8.6); abrupt wavy boundary.

R--12 inches; fractured andesite.

Type location: Elko County, Nevada; approximately 12.5 miles northeast of Lages Junction, Nevada; about 1,200 feet south and 1,000 feet west of the northeast corner of section 4, T.26 N., R.66 E.; (40 degrees, 09 minutes, 36 seconds north latitude and 114 degrees, 31 minutes, 34 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, but is moist in some part more than 25 to 35 percent of the time the soil temperature is above 41 degrees F. It is dry in all parts for 45 to 60 consecutive days following the summer solstice.

Soil temperature: 47 to 53 degrees F.

Depth to bedrock: 10 to 20 inches.

Depth to the calcic horizon: 2 to 11 inches.

Control section:

Clay content--18 to 27.

Rock fragments--35 to 60 percent.

Tarnach Series

The Tarnach series consists of shallow, well drained, soils that formed in residuum and colluvium from andesite influenced by calcareous loess. Tarnach soils are on hills and mountains. Slopes are 8 to 50 percent. The mean annual precipitation is about 10 inches. The mean annual temperature is about 48 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Lithic Xerollic Calciorthids

Typical pedon: Tarnach very gravelly loam in an area of map unit 691. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 50 percent pebbles and 15 percent flagstones.

A--0 to 3 inches; light brownish gray (10YR 6/2) very gravelly loam, brown (10YR 4/3) moist; strong medium platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine and fine interstitial pores; 40 percent pebbles; 1 to 2 millimeter thick lime coats and pendants on undersides of pebbles; violently effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary.

Bk1--3 to 9 inches; pale brown (10YR 6/3) very gravelly loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, common

A horizon:

Value--5 to 7 dry and 4 or 5 moist.

Chroma--2 or 3.

Reaction--Moderately alkaline or strongly alkaline.

Bk horizons:

Value--6 or 7 dry, and 4 or 5 moist.

Chroma--3 or 4.

Effervescence--Slightly effervescent to violently effervescent.

Reaction--Moderately alkaline or strongly alkaline.

Tecomar Series

The Tecomar series consists of shallow, well drained soils that formed in residuum and colluvium from limestone and dolomite. Tecomar soils are on hills and mountains. Slopes

are 8 to 50 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 45 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, mesic
Lithic Xerollic Calciorthids

Typical pedon: Tecomar extremely gravelly loam, located in an area of map unit 1430. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 60 percent pebbles, 5 percent cobbles, and 1 percent stones.

A--0 to 2 inches; light brownish gray (10YR 6/2) extremely gravelly loam, brown (10YR 4/3) moist strong very thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine, fine and medium vesicular pores; 55 percent pebbles, 5 percent cobbles, and 1 percent stones; violently effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary.

Bk1--2 to 6 inches; very pale brown (10YR 7/3) very cobbly silt loam, yellowish brown (10YR 5/4) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine and medium roots; common very fine interstitial pores; 10 percent pebbles, 40 percent cobbles, and 1 percent stones; thin lime pendants on undersides of rock fragments; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

Bk2--6 to 14 inches; very pale brown (10YR 7/4) extremely cobbly silt loam, yellowish brown (10YR 5/4) moist; massive; soft, very friable, slightly sticky and slightly plastic; common very fine, fine and medium roots; common very fine interstitial pores; 30 percent pebbles, 40 percent cobbles, and 1 percent stones; thick lime pendants on undersides of rock fragments; violently effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary.

R--14 inches; hard limestone.

Type location: Elko County, Nevada; approximately 9 miles west of Wendover in the Toano Range; located in an unsectioned area about 400 feet south and 1,400 feet west of the projected northeast corner of section 18, T.33 N., R.69 ; (40 degrees, 44 minutes, 23 seconds north latitude and 114 degrees, 12 minutes, 44 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry June through October.

Soil temperature: 47 to 52 degrees F.

Depth to bedrock: 10 to 20 inches.

Depth to calcic horizon: 2 to 14 inches.

Reaction: Moderately alkaline or strongly alkaline.

Control section:

Clay content--20 to 27 percent.

Rock fragments--50 to 80 percent, mainly pebbles, cobbles and some stones.

Calcium carbonate equivalent--40 to 60 percent by weight of the less than 20 millimeters fraction.

A horizon:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 3.

Bk horizons:

Value--6 through 8 dry, 4 through 7 moist.

Chroma--3 or 4.

Structure--Subangular block or it is massive.

Consistence--Soft or slightly hard dry, slightly sticky to sticky, moist; slightly plastic to plastic, wet.

Theriot Series

The Theriot series consists of very shallow and shallow, well drained soils that formed in residuum and colluvium from limestone. Theriot soils are on hills. Slopes are 8 to 50 percent. The mean annual precipitation is about 6 inches and the mean annual temperature is 53 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, mesic
Lithic Torriorthents

Typical pedon: Theriot cobbly fine sandy loam located in an area of map unit 1532. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 50 percent pebbles, 25 percent cobbles, and 1 percent stones.

A--0 to 3 inches; light gray (10YR 7/2) cobbly fine sandy loam, brown (10YR 5/3) moist; moderate thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many interstitial and common very fine vesicular pores; common less than 1 millimeter thick lime coats on undersides of rock fragments; 15 percent pebbles and 15 percent cobbles; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

C1--3 to 8 inches; very pale brown (10YR 7/3) very gravelly fine sandy loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, and few medium roots; many interstitial and very fine

tubular pores; few thin lime coats and pendants on undersides of rock fragments; 35 percent pebbles and 15 percent cobbles; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

C2--8 to 15 inches; very pale brown (10YR 7/3) very cobbly fine sandy loam, brown (10YR 5/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, medium and coarse roots; many very fine interstitial and tubular pores; common 2 to 3 millimeter thick lime coats and pendants on undersides of rock fragments; 25 percent pebbles and 30 percent cobbles; violently effervescent; strongly alkaline (pH 8.8); abrupt irregular boundary.

R--15 inches; limestone.

Type location: Elko County, Nevada; approximately 24 miles south of Wendover; about 300 feet south and 800 feet west of the northeast corner of section 8, T.29 N., R.70 E.; (40 degrees, 24 minutes, 20 seconds north latitude and 114 degrees, 05 minutes, 25 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in some part for short periods during winter and early spring months and for 10 to 20 days in the upper part in the summer due to convection storms.

Soil temperature: 53 to 59 degrees F.

Depth to bedrock: 4 to 20 inches.

Control section:

Clay content--10 to 20 percent

Rock fragments--50 to 80 percent; dominantly stones or cobbles, but is mostly pebbles in some pedons.

Reaction--Moderately alkaline to very strongly alkaline.

A horizon:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 3.

C horizons:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 through 4.

Structure--Platy or subangular blocky or is massive.

Consistence--Soft or slightly hard, dry very friable or friable moist.

Texture--Loam, fine sandy loam, or sandy loam.

Carbonates--Thin to thick lime pendants on rock fragments are common in the lower part. Thin

noncemented or cemented Bk horizons cap the bedrock in some pedons.

Calcium carbonate equivalent--40 to 60 percent

Threesee Series

Threesee series consists of very deep, well drained soils that formed in reworked mixed alluvium. Threesee soils are on beach plains and beach bars. Slopes are 0 to 8 percent. The mean annual precipitation is about 8 inches and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Sandy-skeletal, mixed, mesic Xerollic Calciorthids

Typical pedon: Threesee gravelly loam, in an area of map unit 1460. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 20 percent pebbles.

A--0 to 3 inches; light brownish gray (10YR 6/2) gravelly loam, dark brown (10YR 4/3) moist; moderately coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine interstitial pores; 15 percent pebbles; slightly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bw1--3 to 9 inches; pale brown (10YR 6/3) gravelly loam, brown (10YR 4/3) moist; moderate coarse subangular blocky structure; soft, very friable slightly sticky and slightly plastic; many very fine, fine and few medium roots; few very fine interstitial and few fine tubular pores; 10 percent calcium carbonate equivalent; 15 percent pebbles; few thin lime coats on rock fragments; slightly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bw2--9 to 14 inches; pale brown (10YR 6/3) gravelly loam, brown (10YR 4/3) moist; moderate coarse subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine to medium and few coarse roots; few very fine interstitial and tubular pores; 12 percent calcium carbonate equivalent; 15 percent pebbles; few thin lime coats on pebbles; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

2Bk--14 to 24 inches; light gray (10YR 7/2) very gravelly loamy sand, brown (10YR 4/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine to medium roots; few very fine tubular and interstitial pores; continuous weak lime cementation; 20 percent calcium carbonate equivalent; 35 percent pebbles; many thin lime coats on pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

2Bkq1--24 to 46 inches; light gray (10YR 7/2) very gravelly loamy sand, pale brown (10YR 6/3) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine to medium roots; 50 percent discontinuous weak lime and silica cementation, slightly hard and friable; 20 percent calcium carbonate equivalent; 50 percent pebbles; common thin lime coats on undersides of pebbles; violently effervescent; strongly alkaline (pH 8.6); gradual smooth boundary.

3Bkq2--46 to 54 inches; variegated stratified coarse sand to very gravelly coarse sand; massive; soft, very friable, nonsticky and nonplastic; 10 percent discontinuous weak lime and silica cementation; 30 percent calcium carbonate equivalent; 40 percent pebbles; common thin lime coats on undersides of pebbles; violently effervescent; strongly alkaline (pH 8.6); gradual smooth boundary.

3C--54 to 60 inches; variegated stratified coarse sand to very gravelly coarse sand; massive; soft, very friable, nonsticky and nonplastic; 5 percent discontinuous weak lime and silica cementation; 18 percent calcium carbonate equivalent; 10 percent pebbles; strongly effervescent; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; approximately 13 miles south of Highway 229 on the CCC Road in Ruby Valley, about 2,900 feet west and 475 feet north of the southeast corner of section 8, T.30 N., R.61 E.; (40 degrees, 29 minutes, 20 seconds north latitude and 115 degrees, 07 minutes, 06 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist late fall and early spring, dry late spring through mid fall.

Soil temperature: 47 to 52 degrees F.

Depth to calcic horizons: 14 to 20 inches.

Control section:

Clay content--Averages 4 to 10 percent.

A horizon:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 3.

Calcium carbonate equivalent--(Less than 2 millimeter fraction) 1 to 10 percent.

Bw horizons:

Value--6 or 7 dry, 3 or 4 moist.

Chroma--2 or 3.

Clay content--10 to 18 percent.

Texture--Loam or sandy loam.

Rock fragments--15 to 35 percent.

Consistence--Soft or slightly hard dry, slightly sticky to nonsticky wet.

Calcium carbonate equivalent--(Less than 2 millimeter fraction) 10 to 20 percent.

Bk horizons:

Value--6 or 7 dry, subhorizons are variegated.

Chroma--2 or 3.

Clay content--4 to 10 percent.

Texture--Loamy sand; subhorizons of coarse sand are in most pedons.

Rock fragments--35 to 55 percent.

Consistence--Soft or slightly hard dry.

Calcium carbonate equivalent--(Less than 2 millimeter fraction) 20 to 30 percent.

Other features--Subhorizons are continuously weakly lime cemented.

3C horizon:

Calcium carbonate equivalent--(Less than 2 millimeter fraction) 10 to 20 percent.

Timpie Series

The Timpie series consists of very deep, well drained, soils that formed in alluvium and lacustrine sediments derived dominantly from limestone and quartzite. Timpie soils are on lake plains, beach plains, and alluvial flats. Slopes are 0 to 2 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 49 degrees F.

Taxonomic class: Fine-silty, mixed (calcareous), mesic Typic Torriorthents

Typical pedon: Timpie silt loam located in an area of map unit 845. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; light brownish gray (10YR 6/2) silt loam, dark brown (10YR 4/3) moist; strong thick platy structure; hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; many very fine vesicular and few very fine, fine tubular pores; strongly effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary.

A2--2 to 8 inches; pale brown (10YR 6/3) silt loam, dark brown (10YR 4/3) moist; strong thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine and few medium roots; common very fine, fine and medium tubular pores; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

Bw1--8 to 19 inches; very pale brown (10YR 7/4) silt loam,

dark yellowish brown (10YR 4/4) moist; weak coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular pores; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

Bw2--19 to 30 inches; very pale brown (10YR 7/3) silt loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine and fine tubular pores; violently effervescent; strongly alkaline (pH 8.6); gradual smooth boundary.

C--30 to 60 inches; very pale brown (10YR 7/4) silt loam, yellowish brown (10YR 5/4) moist; massive; soft, very friable, slightly sticky and slightly plastic; few very fine and fine roots; few very fine and fine tubular pores; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

Type location: Elko County, Nevada; approximately 10 miles southwest of White Horse Pass in the Antelope Valley; about 250 feet north and 100 feet west of the southeast corner of section 6, T.27 N., R.68 E.; (40 degrees, 14 minutes, 00 seconds north latitude and 114 degrees, 20 minutes, 00 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry more than 75 percent of the time when the soil temperature is above 41 degrees F. They are moist for fewer than 10 days between July and October.

Soil temperature: 49 to 54 degrees F.

Control section:

Clay content--18 to 27 percent clay with less than 15 percent fine sand or coarser.

Calcium carbonate equivalent--15 to 40 percent.

A horizons:

Value--5 through 7 dry, 4 or 5 moist.

Chroma--2 or 3.

Reaction--Moderately alkaline to very strongly alkaline.

Electrical conductivity--Less than 8 millimhos/cm.

Bw and C horizons:

Value--6 or 7 dry, 4 to 6 moist.

Chroma--2 through 4.

Texture--Silt loam or very fine sandy loam.

Reaction--Strongly alkaline or very strongly alkaline.

Electrical conductivity--4 to greater than 16 millimhos/cm.

Toano Series

The Toano series consists of very deep, well drained soils that formed in silty alluvium with a component of loess and volcanic ash. Toano soils are on fan skirts, inset fans, and lagoons. Slopes are 0 to 4 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Coarse-silty, mixed (calcareous), mesic Typic Torriorthents

Typical pedon: Toano very fine sandy loam, located in an area of map unit 171. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; light gray (10YR 7/2) very fine sandy loam, brown (10YR 5/3) moist; strong thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine vesicular pores; violently effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary.

A2--3 to 9 inches; very pale brown (10YR 7/3) very fine sandy loam, brown (10YR 5/3) moist; moderate thin platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine interstitial pores; violently effervescent; strongly alkaline (pH 8.6); gradual smooth boundary.

Bw--9 to 19 inches; very pale brown (10YR 7/3) silt loam, light yellowish brown (10YR 6/4) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine interstitial pores; 3 percent pebbles; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary.

C1--19 to 27 inches; light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; moderate thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; few very fine interstitial pores; 3 percent pebbles; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary.

C2--27 to 38 inches; light gray (10YR 7/2) very fine sandy loam, brown (10YR 5/3) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine and few medium roots; common very fine interstitial pores; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

C3--38 to 60 inches; white (10YR 8/2) silt loam, light gray (2.5Y 7/2) moist; common medium distinct mottles of yellowish brown (10YR 5/6); moderate medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine interstitial pores; violently effervescent; moderately alkaline (pH 8.4).

Type location: Elko County, Nevada; approximately 7 miles northwest of Wendover; located in an unsectionized area about 1,500 feet south and 900 feet east of the projected northwest corner of section 26, T.34 N., R.69 E.; (40 degrees, 47 minutes, 41 seconds north latitude and 114 degrees, 08 minutes, 49 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry; moist for short periods in winter and spring, dry late May through November.

Soil temperature: 53 to 59 degrees F.

Control section:

Clay content--8 to 15 percent.

Rock fragments--Less than 5 percent in any subhorizon.

Reaction--Moderately alkaline or strongly alkaline.

Calcium carbonate equivalent--10 to 30 percent.

A horizons:

Hue--2.5Y or 10YR.

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 3.

Effervescence--Strongly effervescent or violently effervescent.

Bw horizon:

Hue--2.5Y or 10YR.

Value--6 or 7 dry, 4 through 6 moist.

Chroma--2 through 4.

Texture--Silt loam or very fine sandy loam.

Structure--Medium or coarse subangular blocky.

Consistence--Soft or slightly hard dry.

C horizons:

Hue--2.5Y or 10YR.

Value--6 through 8 dry, 4 through 7 moist.

Chroma--2 or 3.

Structure--Massive or platy.

Consistence--Soft or slightly hard dry, nonsticky or slightly sticky and nonplastic or slightly plastic wet.

Other features--Some pedons have stratified extremely gravelly sandy loam to extremely gravelly sand below 40 inches. Some pedons have relict mottles in the lower C horizon.

Toba soils are on axial stream floodplains. Slopes are 0 to 2 percent. The mean annual precipitation is about 8 inches and the mean annual air temperature is about 47 degrees F.

Taxonomic class: Fine-loamy over sandy or sandy-skeletal, mixed, mesic Aquic Calciorthids

Typical pedon: Toba loam, in an area of map unit 1380. (Colors are for dry soil unless otherwise noted.)

A--0 to 4 inches; very dark gray (10YR 3/1) loam, black (10YR 2/1) moist; moderate medium and thick platy structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, fine, and medium roots; common fine tubular pores; strongly effervescent; strongly alkaline (pH 8.5); abrupt wavy boundary.

Bk1--4 to 14 inches; white (5Y 8/1) clay loam, light gray (5Y 7/2) moist; few to common dark gray (10YR 4/1) fine and medium organic stains in root channels and on faces of peds tonging from above; moderate fine and medium subangular blocky structure; slightly hard, friable, sticky and plastic; common fine and medium roots; common fine tubular and interstitial pores; violently effervescent; 5 percent fine and medium slightly hard lime and silica nodules; strongly alkaline (pH 8.8); clear smooth boundary.

2Bk2--14 to 23 inches; light gray (5Y 7/2) loamy fine sand, light olive gray (5Y 6/2) moist; few to common dark olive gray (5Y 3/2) organic stains; tonguing from above; few fine distinct olive yellow (2.5Y 6/6) iron mottles; massive; slightly hard, friable, nonsticky and nonplastic; common fine and medium roots; common fine interstitial pores; strongly effervescent; common fine and medium white (5Y 8/2) lime filaments and threads with few fine soft lime masses; strongly effervescent; strongly alkaline (pH 8.7); clear wavy boundary.

2Bk3--23 to 34 inches; light gray (5Y 7/2) fine sand, olive gray (5Y 5/2) moist; few fine distinct olive yellow (2.5Y 6/6) mottles and manganese stains; massive; soft; very friable, nonsticky and nonplastic; common fine and medium interstitial pores; 15 percent fine and medium lime and silica nodules; slightly effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary.

2Bk4--34 to 60 inches; light gray (5Y 7/2) sand, olive gray (5Y 5/3) moist; few fine distinct dark gray (5Y 4/1) mottles; single grain; loose, nonsticky and nonplastic; common fine and medium interstitial pores; slightly effervescent; few fine and medium lime and silica nodules; moderately alkaline (pH 8.0).

Toba Series

The Toba series consists of very deep, poorly drained soils that formed in mixed loamy alluvium over lacustrine sands.

Type location: Elko County, Nevada; about 18 miles south of Wells in Clover Valley; in an unsectionized area; approximately 2,400 feet north of Bapt Reservoir; about 1,900 feet north and 200 feet west of the

projected southeast corner of section 21, T.34 N., R.63 E.; (40 degrees, 48 minutes, 45 seconds north latitude and 114 degrees, 51 minutes, 10 seconds west longitude.)

Range in characteristics:

Soil moisture: Saturated below depths of 18 to 24 inches for one month during most years mainly during late winter and early spring. The moisture control section is dry from late May through October in most years.

Drained phases are recognized.

Soil temperature: 47 to 52 degrees F.

Depth to contrasting horizon: 12 to 25 inches.

Control section:

Clay content--20 to 40 percent in the upper part and less than 5 percent in the lower part.

A horizon:

Hue--10YR, 2.5Y or 5Y.

Value--2 through 4 dry.

Chroma--1 or 2.

Bk1 horizon:

Hue--2.5 Y, 5Y or 10YR.

Value--7 or 8 dry, 5 through 7 moist.

Chroma--1 through 3.

SAR--15 to 35.

Other features--Few to common organic stains along root channels tonguing from A horizon.

2Bk horizons:

Value--6 or 7 dry, 4 through 7 moist.

Structure--Massive or single grain.

Consistence--Loose to slightly hard dry, loose to friable moist.

Chroma--2 through 4.

Mottles--Few fine distinct redoximorphic concentrations from 14 to 60 inches.

Effervescence--Noneffervescent to strongly effervescent.

Other features--Lacustrine silts and clays may occur in some thin strata below 40 inches in some pedons. A few strata may have up to 30 percent pebbles in some pedons. Few to common lime and silica nodules are common. Few to common organic stains in upper subhorizons tonguing from A horizon.

Tooele Series

The Tooele series consists of very deep, well drained,

moderately rapid permeable soils that formed in mixed alluvium and lacustrine sediments. Tooele soils are on fan skirts and lake plains. Slopes are 2 to 4 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Coarse-loamy, mixed (calcareous), mesic Typic Torriorthents

Typical pedon: Tooele sandy loam in an area of map unit 130. (Colors are for dry soil unless otherwise noted.)

The soil surface is partially covered by approximately 25 percent pebbles.

A--0 to 5 inches; light gray (10YR 7/2) sandy loam, dark grayish brown (10YR 4/2) moist; weak thick platy structure parting to strong thin platy structure; slightly hard, very friable, nonsticky and nonplastic; common very fine and few medium roots; many very fine interstitial and common fine vesicular pores; 5 percent pebbles; violently effervescent; very strongly alkaline (pH 9.3) clear smooth boundary.

C1--5 to 8 inches; very pale brown (10YR 7/3) fine sandy loam, dark brown (10YR 4/3) moist; weak medium platy structure; soft, very friable, nonsticky and nonplastic; common very fine, few fine and medium roots; common very fine interstitial pores; 1 percent pebbles; violently effervescent; very strongly alkaline (pH 9.3); clear wavy boundary.

C2--8 to 19 inches; light gray (10YR 7/2) fine sandy loam, brown (10YR 5/3) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine, fine, medium and coarse roots; common very fine interstitial pores; 2 percent pebbles; violently effervescent; very strongly alkaline (pH 9.3); gradual wavy boundary.

C3--19 to 32 inches; light gray (2.5Y 7/2) fine sandy loam, grayish brown (2.5Y 5/2) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine and medium roots; common very fine interstitial pores; 3 percent pebbles; violently effervescent; strongly alkaline (pH 9.0); clear wavy boundary.

C4--32 to 44 inches; light gray (2.5Y 7/2) fine sandy loam, grayish brown (2.5Y 5/2) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine and medium roots; common very fine interstitial pores; 10 percent pebbles; violently effervescent; strongly alkaline (pH 8.8); abrupt wavy boundary.

2C1--44 to 60 inches; light gray (2.5Y 7/2) stratified sandy loam to silt loam, dark grayish brown (2.5Y 4/2) moist;

moderate thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine and common fine interstitial pores; 5 percent pebbles; strongly alkaline (pH 8.5).

Type location: Elko County, Nevada; approximately 3 miles northwest of the Cummings Ranch; located in an unsectioned area 8,600 feet north and 1,300 feet east of the northwest corner of section 4, T.35 N., R.69 E.; (40 degrees, 58 minutes, 25 seconds north latitude and 114 degrees, 11 minutes, 04 seconds west longitude.)

Range in characteristics:

Soil temperature: 47 to 52 degrees F.

Soil moisture: Dry in all parts of the moisture control section more than 3/4 of the time that the soil temperature is above 41 degrees F.

Control section:

Texture--Fine sandy loam.
Calcium carbonate equivalent--10 to 40 percent.
Clay content--2 to 18 percent.
Exchangeable sodium--15 to 35 percent.
Rock fragments--0 to 15 percent throughout the profile.
Reaction--Moderately alkaline to very strongly alkaline throughout.

A horizon:

Value--6 or 7 dry, 4 to 6 moist.
Chroma--2 through 4.

C horizon:

Value--6 or 7 dry, 4 to 6 moist.
Chroma--2 to 4.
Texture--Loam, fine sandy loam, or sandy loam. Some pedons are loamy fine sand, fine sand, sand, medium or coarse sand in the lower part of the C horizon.
Clay content--2 to 18 percent.
Electrical conductivity--4 to 16 mmhos/cm.

Tosser Series

The Tosser series consists of very deep, well drained soils that formed in mixed alluvium. Tosser soils are on beach bars, offshore bars, barrier bars, and beach terraces. Slopes are 2 to 8 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 49 degrees F.

Taxonomic class: Sandy-skeletal, mixed, mesic Xerollic Calciorthids

Typical pedon: Tosser very gravelly sandy loam, in an area of map unit 1460. (Colors are for dry soil unless

otherwise noted.) The soil surface is partially covered by approximately 70 percent pebbles.

- A1--0 to 2 inches; light brownish gray (10YR 6/2) very gravelly sandy loam, brown (10YR 4/3) moist; moderate coarse platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine vesicular pores; 35 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary.
- A2--2 to 10 inches; pale brown (10YR 6/3) very gravelly sandy loam, yellowish brown (10YR 5/4) moist, moderate medium subangular blocky structure; slightly hard, very friable slightly sticky and slightly plastic; few very fine, fine and medium roots; common very fine and fine tubular pores; 35 percent pebbles; violently effervescent; moderately alkaline (pH 8.2); clear smooth boundary.
- Bkq1--10 to 16 inches; pale brown (10YR 6/3) very gravelly loamy sand, yellowish brown (10YR 5/4) moist; hard, firm, nonsticky and nonplastic; few very fine roots; many interstitial pores; many thick lime and silica pendants on undersides of pebbles; 55 percent pebbles; violently effervescent; strongly alkaline (pH 8.5); abrupt smooth boundary.
- Bkq2--16 to 26 inches; pale brown (10YR 6/3) extremely gravelly sand, yellowish brown (10YR 5/4) moist; loose; nonsticky and nonplastic; few very fine and fine roots; many interstitial pores; coated with lime with thick lime and silica pendants on the undersides of pebbles; 70 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary.
- Bkq3--26 to 60 inches; pale brown (10YR 6/3) very gravelly sand, yellowish brown (10YR 5/4) moist; loose, nonsticky and nonplastic; few very fine and fine roots; many interstitial pores; coated with lime with thick lime and silica pendants on undersides of pebbles; 55 percent pebbles; violently effervescent; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; approximately 15 miles northwest of Odgers Ranch; about 1,100 feet north and 2,100 feet east of the southwest corner of section 8, T.30 N., R.61 E.; (40 degrees, 29 minutes, 26 seconds north latitude and 115 degrees, 07 minutes, 10 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in some parts 25 to 35 percent of the time. The soil temperature at 20 inches is above 41 degrees F. It is dry in all parts for 45 to 60 consecutive days following the summer solstice.

Soil temperature: 50 to 53 degrees F.

Rock fragments--35 to 75 percent

Clay content--2 to 8 percent in the particle-size control section.

Depth to calcic horizon--7 to 12 inches.

A horizons:

Value--6 or 7 dry, 4 to 5 moist.

Chroma--2 through 4.

Reaction--Moderately alkaline to strongly alkaline.

B horizons:

Hue--10YR or 2.5Y

Value--5 or 6 dry and 4 or 5 moist

Chroma--2 through 4.

Texture--Loamy sand or sand.

Reaction--Moderately alkaline to very strongly alkaline and slightly effervescent to violently effervescent.

Other features--Some pedons are stratified in the lower part of the particle-size control section. Some pedons have subhorizons of very gravelly loam.

Tulase Series

The Tulase series consists of very deep, well drained soils that formed in silty alluvium with a component of loess and volcanic ash. Tulase soils are on inset fans and fan skirts. Slopes are 2 to 8 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Coarse-silty, mixed (calcareous), mesic Durorthidic Xeric Torriorthents

Typical pedon: Tulase very fine sandy loam located in an area of map unit 700. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered with 5 percent pebbles.

A--0 to 2 inches; light brownish gray (10YR 6/2) very fine sandy loam, brown (10YR 4/3) moist; strong thick platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine, fine vesicular and few very fine tubular pores; strongly effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary.

C--2 to 6 inches; pale brown (10YR 6/3) very fine sandy loam, brown (10YR 4/3) moist; strong coarse angular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; few very fine tubular and vesicular pores; 5 percent 2 to 5 millimeter pebbles; violently effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary.

Cq--6 to 14 inches; light gray (10YR 7/2) very fine sandy loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and slightly plastic; common very fine, fine, medium and few coarse roots; few very fine tubular pores; 20 percent irregular-shaped durinodes; violently effervescent; moderately alkaline (pH 8.0); abrupt smooth boundary.

Ckq1--14 to 20 inches; very pale brown (10YR 7/3) very fine sandy loam, light yellowish brown (10YR 6/4) moist; massive; hard, friable, nonsticky and slightly plastic; common very fine, fine and few medium roots; few very fine vesicular and tubular pores; 50 percent discontinuous weak silica cementation; few fine lime filaments; violently effervescent; moderately alkaline (pH 8.0); clear smooth boundary.

Ckq2--20 to 60 inches; very pale brown (10YR 8/3) very fine sandy loam, light yellowish brown (10YR 6/4) moist; common medium distinct pink (7.5 YR 7/4) mottles, reddish yellow (7.5YR 6/6) moist; massive; hard, friable, nonsticky and nonplastic; few very fine, fine and medium roots; few very fine vesicular and tubular pores; 50 percent discontinuous weak silica cementation; few fine lime filaments; violently effervescent; moderately alkaline (pH 8.2).

Type location: Elko County, Nevada; approximately 21 miles northwest of Wendover, Nevada; in an unsectionized area 1 mile west and 1,200 feet south of the northwest corner of section 7, T.35 N., R.68 E.; (40 degrees, 55 minutes, 53 seconds north latitude and 114 degrees, 21 minutes, 42 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist in winter and spring, dry late June through October.

Soil temperature: 47 to 52 degrees F.

Depth to Cq horizon: 11 to 35 inches.

Control section:

Rock fragments--0 to 5 percent pebbles.

A horizon:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 3.

C horizon:

Value--6 or 7 dry, 4 or 5 moist.

Structure--Prismatic, massive, or angular blocky.

Consistence--Soft through hard, dry; very friable, nonsticky or slightly sticky, nonplastic or slightly plastic, wet.

Cq, Ckq horizons:

Value--7 or 8 dry, 5 or 6 moist.

Chroma--2 through 4.

Structure--Massive or subangular blocky.

Texture--Silt loam or very fine sandy loam.

Consistence--Soft through hard, dry; very friable or friable, moist; nonsticky or slightly sticky, nonplastic or slightly plastic, wet.

Silica cementation--20 to 50 percent durinodes or up to 50 percent discontinuous silica-lime cementation is common in most Ckq horizons.

Tusel Series

The Tusel series consists of deep and very deep well drained soils that formed in residuum and colluvium from quartzite. Tusel soils are on mountain side slopes. Slopes are 15 to 75 percent. The mean annual precipitation is about 17 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Loamy-skeletal, mixed Argic Pachic Cryoborolls

Typical pedon: Tusel gravelly loam is located in Elko County, Nevada, Central Part map unit 1729. (Colors are for dry soil unless otherwise noted.)

A1--0 to 10 inches; dark grayish brown (10YR 4/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; many very fine interstitial pores; 15 percent pebbles and 5 percent cobbles; neutral (pH 6.8); gradual wavy boundary.

A2--10 to 19 inches; brown (10YR 5/3) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine roots; many very fine interstitial pores and common fine tubular pores; 25 percent pebbles and 5 percent cobbles; neutral (pH 6.8); clear wavy boundary.

2Bt1--19 to 28 inches; pale brown (10YR 6/3) very gravelly clay loam, dark grayish brown (10YR 4/2) moist; moderate medium subangular structure; slightly hard, friable, sticky and plastic; common very fine and few fine and medium roots; common very fine and few fine tubular pores; few thin clay films on faces of peds and lining pores; 40 percent pebbles and 10 percent cobbles; neutral (pH 6.7); clear wavy boundary.

2Bt2--28 to 45 inches; pale brown (10YR 6/3) very gravelly clay loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; slightly hard, friable, sticky

and plastic; few fine roots; common very fine tubular pores; common moderately thick clay films on faces of peds and lining pores; 40 percent pebbles and 15 percent cobbles; neutral (pH 6.7); abrupt irregular boundary.

2R--45 inches; quartzite bedrock.

Type location: Elko County, Nevada; approximately 26 miles southwest of Elko; about 2,000 feet north and 2,000 feet west of the southeast corner of section 26, T.30 N., R.53 E.; (40 degrees, 27 minutes, 08 seconds north latitude and 115 degrees, 58 minutes, 25 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually moist in the late fall through early summer, dry late July through September.

Soil temperature: 43 to 47 degrees F.

Summer soil temperature: 58 to 59 degrees F.

Depth to bedrock: 40 to over 80 inches.

Depth to base of Bt horizon: 36 to over 50 inches.

Mollic epipedon thickness: 16 to 22 inches, includes the upper argillic horizon of some pedons.

Control section:

Clay content--25 to 35 percent.

Rock fragments--50 to 75 percent, mainly pebbles.

Reaction--Slightly acid or neutral.

A horizon:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--2 or 3.

Bt horizons:

Hue--10YR or 7.5YR.

Value--4 through 6 dry, 3 or 4 moist.

Chroma--2 through 4.

Texture--Sandy clay loam or clay loam, with 40 to 60 percent sand.

Clay content--25 to 35 percent, when averaged.

Rock fragments--40 to 60 percent pebbles, 10 to 25 percent cobbles, and 0 to 10 percent stones

Consistence--Slightly sticky or sticky and slightly plastic or plastic

Structure--Weak to strong subangular blocky or angular blocky. Some pedons have lower subhorizons that are massive.

Umbreland Series

The Umbreland series consists of very deep, somewhat poorly drained soils that formed in lacustrine sediments. Umbreland soils are on lake plains. Slopes are 0 to 2

percent. The mean annual precipitation is about 6 inches and the mean annual temperature is about 49 degrees F.

Taxonomic class: Fine, montmorillonitic (calcareous), mesic Aeris Halaquepts

Typical pedon: Umlerland silty clay located in an area of map unit 761. (Colors are for dry soil unless otherwise noted.)

A1--0 to 2 inches; light gray (5Y 7/1) silty clay, gray (5Y 6/1) moist; strong medium prismatic structure parting to strong medium granular structure; hard, firm, sticky and plastic; few very fine roots; many very fine tubular and vesicular pores; violently effervescent; very strongly alkaline (pH 9.2); abrupt smooth boundary.

A2--2 to 5 inches; light gray (5Y 7/1) silty clay loam, olive gray (5Y 5/2) moist; weak medium prismatic structure parting to strong medium granular; slightly hard, very friable, sticky and plastic; common very fine roots; many very fine tubular and vesicular pores; violently effervescent; very strongly alkaline (pH 9.6); abrupt smooth boundary.

C1--5 to 15 inches; pale olive (5Y 6/3) silty clay, pale olive (5Y 6/3) moist; strong coarse prismatic structure; hard, firm, sticky and very plastic; common very fine and few fine roots; common very fine tubular pores; violently effervescent; very strongly alkaline (pH 9.6); clear smooth boundary.

C2--15 to 24 inches; white (5Y 8/1) silty clay loam, light olive gray (5Y 6/2) moist; strong coarse prismatic structure; hard, firm, sticky and plastic; few very fine roots; many very fine tubular pores; few fine faint light olive brown (2.5Y 5/6) mottles; few lime nodules; violently effervescent; very strongly alkaline (pH 9.4); clear smooth boundary.

Ck1--24 to 43 inches; white (5Y 8/1) silty clay, light olive gray (5Y 6/2) moist; massive; hard, firm, sticky and very plastic; few very fine roots; common very fine tubular pores; common fine light olive brown (2.5Y 5/6) and few fine dark olive gray (5Y 3/2) mottles; few lime nodules; strongly effervescent; very strongly alkaline (pH 9.4); clear wavy boundary.

Ck2--43 to 60 inches; white (5Y 8/1) silty clay, light olive gray (5Y 6/2) moist; massive; hard, firm, sticky and plastic; common very fine tubular pores; common fine and medium light olive brown (2.5Y 5/6) mottles; strongly effervescent; strongly alkaline (pH 9.0).

Type location: Elko County, Nevada; approximately 10 miles northeast of the Ruby Lake National Wildlife Refuge Headquarters; about 1,200 feet north and 4,000 feet west of the southeast corner of sec 11, T.28

N., R.58 E.; (40 degrees, 19 minutes, 05 seconds north latitude and 115 degrees, 24 minutes, 29 seconds west longitude.)

Range in characteristics:

Soil moisture: Saturated in some horizons between depths of 20 to 40 inches for at least a month during most years and the capillary fringe moistens the soil to within 6 inches of the surface.

Soil temperature: 47 to 52 degrees F.

Depth to secondary carbonates: 15 to 35 inches. They occur as concretions or nodules.

Salt and sodium: These soils are strongly saline-alkali affected in the upper profile with concentrations usually decreasing with depth.

Control section:

Clay content--35 to 50 percent.

A horizons:

Hue--10YR, 2.5Y or 5Y.

Value--6 through 8 dry, 4 through 6 moist.

Chroma--1 through 4.

C and Ck horizons:

Hue--2.5Y or 5Y.

Value--6 through 8 dry, 4 through 6 moist.

Chroma--1 through 4

Texture--Silty clay loam or silty clay. Some pedons have strata of clay.

Structure--Granular, massive, subangular blocky, angular blocky or prismatic, slightly hard or hard, very friable to firm moist, sticky or very sticky and plastic or very plastic.

Reaction--Strongly alkaline or very strongly alkaline, usually decreasing with depth.

Upatad Series

The Upatad series consists of shallow, well drained soils that formed in residuum and colluvium from rhyolite. Upatad soils are on hills and mountains. Slopes are 8 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Lithic Argixerolls

Typical pedon: Upatad very gravelly silt loam located in an area of map unit 1191. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 60 percent pebbles

A--0 to 2 inches; grayish brown (10YR 5/2) very gravelly silt loam, very dark grayish brown (10YR 3/2) moist; weak thick platy structure; slightly hard, very friable, slightly sticky and slightly plastic; 35 percent pebbles; common very fine and fine roots; common fine vesicular pores; mildly alkaline (pH 7.8); abrupt smooth boundary.

Btq--2 to 8 inches; brown (10YR 5/3) very gravelly clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine and fine, few medium roots; many very fine tubular pores; 35 percent pebbles and 10 percent cobbles; 10 percent hard and firm durinodes; few thin clay films on faces of peds and lining pores; mildly alkaline (pH 7.8); clear smooth boundary.

2Btqk--8 to 14 inches; brown (10YR 5/3) very gravelly clay loam, dark brown (10YR 4/3) moist; weak medium subangular blocky structure; slightly hard, friable, sticky and plastic; few very fine, fine and medium roots; many very fine tubular pores; few thin clay films on faces of peds and lining pores; common 2 millimeter lime and silica coats on undersides of rock fragments; 35 percent pebbles and 10 percent cobbles; strongly effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.

2R--14 inches; rhyolite.

Type location: Elko County, Nevada; approximately 8 miles northwest of Wildcat Peak in the Goshute Mountain Range; 2,600 feet north and 100 feet west of the southeast corner of section 26, T.32 N., R.68 E.; (40 degrees, 37 minutes, 03 seconds north latitude and 114 degrees, 14 minutes, 46 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry summer and fall. (Aridic)

Soil temperature: 47 to 52 degrees F.

Depth to bedrock: 14 to 20 inches.

Mollic epipedon thickness: 8 to 16 inches, includes the upper part of the argillic horizon.

Reaction: Mildly alkaline to moderately alkaline.

Control section:

Clay content--27 to 35 percent.

Rock fragments--35 to 60 percent, of which 20 to 50 percent are pebbles and 10 to 40 percent are cobbles.

A horizon:

Value--5 or 6 dry, 3 or 4 moist.

Chroma--2 or 3.

Btq horizon:

Structure--Weak to moderate, fine to medium angular or subangular blocky.

Concretions--5 to 15 percent fine to coarse, irregular silica concretions.

2Btqk horizon:

Value--5 or 6 dry, 3 or 4 moist.

Chroma--2 through 4.

Structure--Weak to moderate, fine to medium subangular blocky.

Other features--Many thin to thick lime and silica pendants on undersides of rock fragments. Few to common, fine to medium, soft masses of lime on undersides of rock fragments.

Urmafot Series

The Urmafot series consists of well drained soils that are shallow to a duripan that formed in mixed alluvium.

Urmafot soils are on fan piedmont remnants. Slopes are 2 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy, mixed, mesic, shallow Orthidic Durixerolls

Typical pedon: Urmafot gravelly loam, located in an area of map unit 550. (Colors are for dry soils unless otherwise noted.) The soil surface is partially covered with approximately 40 percent pebbles.

A1--0 to 2 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate medium platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine vesicular pores; 20 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

A2--2 to 4 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; 15 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

A3--4 to 7 inches; brown (10YR 5/3) gravelly loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; 15 percent pebbles; violently

effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bk--7 to 11 inches; pale brown (10YR 6/3) gravelly loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; common thin lime pendants on undersides of rock fragments; 15 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bqk--11 to 16 inches; pale brown (10YR 6/3) gravelly loam, brown (10YR 4/3) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; 20 percent discontinuous strong silica cementation that is very hard and very firm; common thin lime pendants on undersides of pebbles; 15 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

2Bqkm--16 to 29 inches; white (10YR 8/1) fractured duripan, very pale brown (10YR 7/3) moist; massive; extremely hard, extremely firm; few very fine roots; common very fine tubular pores; violently effervescent; clear wavy boundary.

3Bqk--29 to 60 inches; extremely gravelly coarse sandy loam light brown (7.5YR 6/4) and brown (7.5YR 5/4) moist; pink (7.5YR 7/4) and light brown (7.5YR 6/4) and 30 percent light brown (7.5YR 6/4), brown (7.5YR 5/4) moist; massive; hard, firm, nonsticky and nonplastic; few very fine roots; common very fine tubular pores; 70 percent discontinuous strong silica cementation; 55 percent pebbles and 5 percent cobbles; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.

Type location: Elko County, Nevada; approximately 20 miles southwest of Currie in Butte Valley, about 800 feet east and 1,000 feet north of the projected southwest corner of section 29, T.27 N., R.61 E.; (40 degrees, 11 minutes, 03 seconds north latitude and 115 degrees, 07 minutes, 38 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist in winter and spring, dry summer through mid fall.

Soil temperature: 47 to 52 degrees F.

Depth to duripan: 9 to 20 inches.

Mollic épipedon thickness: 7 to 12 inches.

Control section:

Clay content--18 to 27 percent.

Rock fragments--15 to 35 percent.

Other features--Some pedons have thin subhorizons that have up to 20 percent strong silica cementation above the pan.

A horizons:

Value--5 or 6 dry, 3 or 4 moist. Averages after mixing values less than 5.5 dry and 3.5 moist.

Chroma--2 or 3.

Bk horizon:

Chroma--3 or 4.

3Bqk horizon:

Hue--10YR or 7.5YR.

Value--6 or 7 dry, 5 or 6 moist.

Chroma--3 or 4.

Clay content--5 to 15 percent.

Consistence--Hard or very hard, firm or very firm moist.

Rock fragments--55 to 80 percent pebbles and 5 to 25 percent cobbles with less than 5 percent stones.

Other features--50 to 70 percent discontinuous silica and lime cementation.

Uvada Series

The Uvada series consists of very deep, well or moderately well drained soils that formed in lacustrine sediments. Uvada soils are on lake plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 50 degrees F.

Taxonomic class: Fine, montmorillonitic, mesic Typic Natrargids

Typical pedon: Uvada silty clay loam located in an area of map unit 1271. (Colors are for dry soil unless otherwise noted.)

A1--0 to 3 inches; light gray (10YR 7/2) silty clay loam, brown (10YR 5/3) moist; moderate medium platy structure parting to very thin platy; slightly hard, very friable, sticky and plastic; few very fine roots; many very fine and fine vesicular pores; violently effervescent (5 percent calcium carbonate equivalent); SAR 5; strongly alkaline (pH 8.6); clear smooth boundary.

A2--3 to 5 inches; light gray (10YR 7/2) silty clay loam, brown (10YR 5/3) moist; moderate medium platy structure; soft, very friable, sticky and plastic; few very fine roots; many very fine and fine vesicular pores; violently effervescent (7 percent calcium carbonate

equivalent); SAR 5; strongly alkaline (pH 8.8); clear smooth boundary.

Btn1--5 to 8 inches; very pale brown (10YR 7/3) silty clay, yellowish brown (10YR 5/4) moist; moderate very fine angular blocky structure; slightly hard, very friable, very sticky and very plastic; many very fine and few fine and medium roots; many very fine tubular pores; light reddish brown (5YR 6/4) common moderately thick clay films on faces of peds and lining pores, reddish brown (5YR 5/4) moist; violently effervescent (20 percent calcium carbonate equivalent); SAR 23; very strongly alkaline (pH 9.2); clear smooth boundary.

Btn2--8 to 17 inches; pinkish gray (7.5YR 7/2) silty clay, brown (7.5YR 5/4) moist; moderate coarse prismatic structure parting to strong fine angular blocky structure; hard, friable, very sticky and very plastic; many very fine and common fine and medium roots; common very fine tubular pores; light reddish brown (5YR 6/4) common moderately thick clay films on faces of peds and lining pores, reddish brown (5YR 5/4) moist; violently effervescent (40 percent calcium carbonate equivalent); SAR 161; very strongly alkaline (pH 9.4); clear smooth boundary.

C1--17 to 34 inches; white (10YR 8/2) silty clay, light gray (2.5Y 7/2) moist; moderate coarse prismatic structure; slightly hard, very friable, very sticky and very plastic; few fine through very coarse roots; many very fine and fine and few medium and coarse tubular pores; violently effervescent; very strongly alkaline (pH 9.4); clear smooth boundary.

C2--34 to 60 inches; white (2.5Y 8/2) stratified silty clay loam to silty clay, light brownish gray (2.5Y 6/2) moist; moderate coarse prismatic structure, parting to very fine angular blocky; slightly hard, very friable, very sticky and very plastic; common very fine and fine tubular pores; violently effervescent; very strongly alkaline (pH 9.4); clear smooth boundary.

Type location: Elko County, Nevada; approximately 5 miles southwest of Hogan Tunnel in the southern end of Independence Valley, about 1,000 feet west and 2,550 feet north of the southeast corner of section 25, T.33 N., R.64 E.; (40 degrees, 42 minutes, 34 seconds north latitude and 114 degrees, 41 minutes, 05 seconds west longitude.)

Range in characteristics:

Soil moisture: Dry in all parts of the moisture control section for 75 to 80 percent of the time the soil temperature is above 41 F.

Soil temperature: 49 to 56 F.

Control section:

Clay content--35 to 60 percent.

Depth to base of natric horizon--13 to 29 inches.

Salt content--0.3 to more than 2 percent in the profile.

A horizons:

Hue--10YR or 7.5YR.

Value--6 through 8 dry, and 4 through 6 moist,

Chroma--2 through 4.

Reaction--Strongly alkaline or very strongly alkaline.

SAR--5 to 40.

Btn horizons:

Hue--10YR or 7.5YR.

Value--5 through 7 dry, and 4 through 6 moist.

Chroma--2 through 6.

Texture--Silty clay loam or silty clay.

Structure--Moderate or strong, medium or coarse columnar or weak through strong prismatic or is angular blocky.

Reaction--Strongly alkaline or very strongly alkaline.

SAR--13 to 90.

Calcium carbonate equivalent--15 to 40 percent.

C horizons:

Hue--7.5YR through 2.5Y.

Value--6 through 8 dry, and 5 through 7 moist.

Chroma--2 through 4.

Texture--Stratified silt loam, silty clay loam, or clay loam.

Structure--Massive or is weak to moderate prismatic parting to angular blocky.

Reaction--Moderately alkaline through very strongly alkaline.

SAR--30 to 90.

Calcium carbonate equivalent--10 to 40 percent.

Other features--Some pedons have stratified silty clay loam and silty clay. Sand and gravelly materials occur below 40 inches in some pedons.

Valmy Series

The Valmy series consists of very deep, well drained soils that formed in mixed alluvium with a loess mantle. Valmy soils are on fan skirts. Slopes are 0 to 2 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 51 degrees F.

Taxonomic class: Coarse-loamy, mixed (calcareous), mesic Durorthidic Torriorthents

Typical pedon: Valmy silt loam located in an area of map unit 211. (Colors are for dry soil unless otherwise noted.)

A--0 to 2 inches; light brownish gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist; moderate thin platy structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine and fine roots; many very fine interstitial pores; violently effervescent; 5 percent pebbles; strongly alkaline (pH 8.6); abrupt smooth boundary.

C--2 to 9 inches; pale brown (10YR 6/3) fine sandy loam, brown (10YR 4/3) moist; massive; slightly hard, very friable, nonsticky and slightly plastic; many very fine and fine and few medium roots; many very fine interstitial pores; violently effervescent; 5 percent pebbles; very strongly alkaline (pH 9.6); clear smooth boundary.

Cqk1--9 to 21 inches; light gray (10YR 7/2) fine sandy loam, grayish brown (10YR 5/2) moist; weak medium platy structure; hard, friable, nonsticky and nonplastic; common very fine, fine, and few medium roots; common very fine interstitial pores; 50 percent brittle durinodes; violently effervescent; 10 percent pebbles; very strongly alkaline (pH 9.6); clear smooth boundary.

Cqk2--21 to 30 inches; light gray (10YR 7/2) fine sandy loam, grayish brown (10YR 5/2) moist; massive; hard, friable, nonsticky and nonplastic; few very fine and fine roots; common very fine interstitial pores; 25 percent brittle durinodes; violently effervescent; 10 percent pebbles; very strongly alkaline (pH 9.4); clear wavy boundary.

Cqk3--30 to 40 inches; light gray (10YR 7/2) gravelly fine sandy loam, grayish brown (10YR 5/2) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine roots; common very fine interstitial pores; 15 percent brittle durinodes; violently effervescent; 30 percent pebbles; very strongly alkaline (pH 9.2); clear wavy boundary.

2C--40 to 60 inches; light gray (10YR 7/2) stratified very fine sandy loam to gravelly silt loam, grayish brown (10YR 5/2) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine roots; many very fine interstitial pores; 5 percent brittle durinodes; violently effervescent; 15 percent pebbles; very strongly alkaline (pH 9.2)

Type location: Elko County, Nevada; approximately 1/2 mile southeast of Wells about 800 feet east and 260 feet south of the northwest corner of section 15 T.37 N., R.62 E.; (41 degrees, 05 minutes, 47 seconds north latitude and 114 degrees, 57 minutes, 40 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist for short periods in winter and spring, dry from May through November. Aridic moisture regime.

Soil temperature: 47 to 53 degrees F.

Depth to Cq horizon: 6 to 20 inches. Durinodes range from 5 to 85 percent by volume in any one horizon but one or more horizons more than 6 inches thick contains more than 25 percent.

Depth to unconformity: 30 to 50 inches, with some pedons deeper than 50 inches to sandy material. Some pedons have a stratified substratum.

Control section:

Clay content--5 to 15 percent.

Rock fragments--0 to 30 percent, mainly pebbles.

A horizon:

Hue--10YR or 2.5Y.

Value--5 through 7 dry, 3 through 5 moist.

Reaction--Moderately alkaline or strongly alkaline.

C and Cqk horizons:

Hue--10YR or 2.5Y.

Value--5 through 7 dry, 4 or 5 moist.

Chroma--2 through 4.

Texture--Mainly fine sandy loam or sandy loam, but includes strata of very fine sandy loam or coarse sandy loam in some pedons.

Durinodes--Hard to extremely hard, very friable to very firm and brittle, nonsticky or slightly sticky and nonplastic or slightly plastic wet.

Reaction--Strongly alkaline or very strongly alkaline.

Effervescence--Slightly effervescent to violently effervescent.

2C horizon:

Texture--Sand; substratum phases have textures of silty clay loam below 40 inches, or are stratified very fine sandy loam to gravelly silt loam.

Clay content--1 to 18 percent.

Structure--Single grain, massive or platy.

Consistence--Loose or slightly hard or hard dry, nonsticky or sticky wet.

Rock fragments--5 to 55 percent.

Reaction--Strongly alkaline or very strongly alkaline.

Wardbay Series

The Wardbay series consists of deep, well drained soils that formed in residuum and colluvium from limestone. Wardbay soils are on mountains. Slopes are 15 to 75

percent. The mean annual precipitation is about 18 inches and the mean annual temperature is about 40 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, frigid
Pachic Calcixerolls

Typical pedon: Wardbay very gravelly loam located in an area of map unit 530. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 40 percent pebbles.

A1--0 to 6 inches; dark grayish brown (10YR 4/2) very gravelly loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine to coarse roots; common very fine tubular pores; 35 percent pebbles; slightly effervescent; mildly alkaline (pH 7.6); clear smooth boundary.

A2--6 to 14 inches; dark grayish brown (10YR 4/2) very gravelly loam, very dark brown (10YR 2/2) moist; moderate fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and few fine to coarse roots; common very fine tubular pores; 35 percent pebbles and 10 percent cobbles; slightly effervescent; mildly alkaline (pH 7.4); clear smooth boundary.

Bk1--14 to 35 inches; brown (10YR 5/3) extremely cobbly silt loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and few fine roots; common very fine tubular pores; many thin lime pendants on undersides of rock fragments; 40 percent pebbles, 15 percent cobbles, and 10 percent stones; violently effervescent; moderately alkaline (pH 8.2); clear wavy boundary.

Bk2--35 to 49 inches; pale brown (10YR 6/3) extremely cobbly silt loam, brown (10YR 5/3) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; common thin lime pendants on undersides of rock fragments; many very fine and fine soft masses and filaments of lime; 40 percent pebbles, 20 percent cobbles, and 15 percent stones; violently effervescent; moderately alkaline (pH 8.2); clear wavy boundary.

Bk3--49 to 55 inches; light yellowish brown (10YR 6/4) extremely cobbly silt loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine tubular pores; many thin lime pendants on undersides of rock fragments; many very fine soft masses and filaments of lime; 40 percent pebbles, 20 percent cobbles, and 15 percent stones; violently effervescent; mildly alkaline (pH 7.9).

2R--55 inches; limestone.

Type location: Elko County, Nevada; approximately 13 miles southwest of Currie, Nevada; 1,000 feet north and 2,600 feet east of the southwest corner of section 8, T.26 N., R.63 E.; (40 degrees, 08 minutes, 20 seconds north latitude and 114 degrees, 53 minutes, 32 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually moist, moist in winter and spring, dry summer and early fall.

Soil temperature: 42 to 47 degrees F.

Depth to bedrock: 40 to 60 inches.

Mollic epipedon: 35 to 60 inches thick.

Control section:

Clay content--18 to 27 percent.

A horizons:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--1 through 3.

Calcium carbonate equivalent--(less than 2 millimeter fraction) 40 to 60 percent.

Bk horizons:

Value--5 or 6 dry, 3 through 5 moist.

Calcium carbonate equivalent--(less than 2 millimeter fraction) 40 to 60 percent.

Texture--Loam or silt loam.

Structure--Massive or subangular blocky.

Consistence--Soft or slightly hard dry.

Rock fragments--60 to 85 percent, of which 35 to 60 percent are pebbles and 25 to 40 percent are cobbles and stones, dominantly cobbles.

Carbonates--Many thin to moderately thick lime pendants, or many thin to thick lime coats on undersides of rock fragments.

Welch Series

The Welch series consists of very deep, very poorly drained soils that formed in mixed alluvium with a component of pyroclastic materials. Welch soils are on fan skirts, flood plains, stream terraces, and inset fans. Slopes are 0 to 4 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 42 degrees F.

Taxonomic class: Fine-loamy, mixed, frigid Cumulic
Endoaquolls

Typical pedon: Welch loam located in an area of map unit 1780. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 5 percent pebbles.

- A1--0 to 3 inches; very dark gray (10YR 3/1) loam, black (10YR 2/1) moist; weak very thick platy structure parting to strong fine platy structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, fine, medium and few coarse roots; few very fine and fine interstitial pores; 5 percent pebbles; neutral (pH 6.8); clear wavy boundary.
- A2--3 to 8 inches; very dark gray (10YR 3/1) loam, black (10YR 2/1) moist; medium very coarse prismatic structure; hard, friable, slightly sticky and slightly plastic; common very fine, few fine and medium roots; common very fine and fine tubular and interstitial pores; 5 percent pebbles; neutral (pH 7.0); gradual smooth boundary.
- A3--8 to 26 inches; very dark gray (10YR 3/1) clay loam, black (10YR 2/1) moist; strong very coarse prismatic structure parting to fine and medium prismatic structure; hard, friable, sticky and plastic; common very fine, fine and medium roots; common very fine and few fine interstitial and tubular pores; 5 percent pebbles; neutral (pH 7.3); gradual smooth boundary.
- Cg1--26 to 33 inches; gray (5Y 6/1) loam, gray (5Y 5/1) moist; moderate medium prismatic structure; hard, friable, slightly sticky and slightly plastic; few fine, medium and very fine roots; many very fine, common fine and medium interstitial and tubular pores; 5 percent pebbles; mildly alkaline (pH 7.4); clear wavy boundary.
- Cg2--33 to 45 inches; gray (10YR 6/1) gravelly loam, dark gray (10YR 4/1) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine interstitial pores; 25 percent pebbles; mildly alkaline (pH 7.6); clear wavy boundary.
- Cg3--45 to 60 inches; light gray (5Y 7/1) very fine sandy loam, gray (5Y 5/1) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; many fine, few fine and medium interstitial and tubular pores; common fine and medium distinct reddish yellow (5YR 6/6) iron mottles; mildly alkaline (pH 7.4).

Type location: Elko County, Nevada; approximately 2 1/4 miles southeast of the Ruby Valley Forest Service Station; about 800 feet north and 2,600 feet east of the southwest corner of section 22, T.33 N., R.60 E.; (40 degrees, 43 minutes, 18 seconds north latitude and 115 degrees, 11 minutes, 20 seconds west longitude.)

Range in characteristics:

Soil moisture: Welch soils are saturated and have aquic conditions at or near the surface for at least one month during most years, mainly during the late winter and early spring months, water table drops to a depth of 18

to 36 inches from early spring through September.

Drained phases are recognized.

Soil temperature: 41 to 46 degrees F.

Mollic epipedon thickness: 26 to over 60 inches, organic matter decreases irregularly with depth.

Control section:

Clay content--27 to 35 percent, when mixed.

Mineralogy--Mixed, but the parent material has a large component of vitric pyroclastic materials.

Other features--Buried A horizons are common. Some pedons have gravelly strata or strata of silty clay loam, silt loam, clay, loam, very fine sandy loam or sandy loam.

A horizons:

Hue--10YR through 5Y or neutral.

Value--3 through 5 dry, 2 or 3 moist.

Chroma--0 through 3 in the upper part and 0 through 2 in the lower part.

Reaction--Slightly acid or neutral.

Other features--Some pedons have redoximorphic concentrations.

C horizons:

Hue--10YR through 5Y or neutral.

Value--5 through 8 dry, 3 through 5 moist.

Chroma--0 through 2.

Structure--Massive or prismatic.

Texture--Stratified dominantly sandy clay loam or clay loam.

Consistence--Slightly hard or hard dry, very friable or friable moist. Slightly sticky or sticky and slightly plastic or plastic.

Reaction--Slightly acid to mildly alkaline.

Mottles--Redoximorphic concentrations are common in many pedons.

Welsum Series

The Welsum series consists of very deep, very poorly drained soils that formed in mixed alluvium. Welsum soils are on fan skirts and areas of flood plains. Slopes are 0 to 2 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 43 degrees F.

Taxonomic class: Fine-loamy over sandy or sandy-skeletal, mixed (calcareous), frigid Cumulic Endoaquolls

Typical pedon: Welsum silt loam located in an area of map unit 1820. (Colors are for dry soil unless otherwise noted.)

A1--0 to 4 inches; gray (10YR 5/1) silt loam, very dark brown (10YR 2/2) moist; moderate medium granular structure; slightly hard, friable, sticky and slightly plastic; many very fine and fine roots; common very fine tubular pores; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

A2--4 to 11 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; strong thick platy structure; slightly hard, friable, sticky and slightly plastic; many very fine and fine roots; many very fine tubular pores; common fine distinct, brown (7.5YR 5/4) moist iron mottles; strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

A3--11 to 25 inches; grayish brown (10YR 5/2) clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; slightly hard, friable, sticky and plastic; common very fine and fine roots; many very fine tubular pores; few fine distinct brown (7.5YR 5/4) moist iron mottles; slightly effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary.

2C--25 to 60 inches; pale brown (10YR 6/3) extremely gravelly sand, brown (10YR 5/3) moist; single grain; loose, nonsticky and nonplastic; few very fine roots; many fine interstitial pores; few thin lime coats on rock fragments; 55 percent pebbles and 5 percent cobbles; slightly effervescent; moderately alkaline (pH 8.2); clear wavy boundary.

Type location: Elko County, Nevada; approximately 1 mile northwest of Welcome, Nevada; 800 feet south and 100 feet east of the northwest corner of section 8, T.37 N., R.61 E.; (41 degrees, 06 minutes, 42 seconds north latitude and 115 degrees, 07 minutes, 05 seconds west longitude.)

Range in characteristics:

Soil moisture: Saturated and aquic conditions at or near the surface for at least one month during most years, mainly during February through June.

Soil temperature: 43 to 47 degrees F.

Mollic epipedon thickness: 25 to 40 inches.

Reaction: Mildly alkaline or moderately alkaline.

Depth to contrasting textures: 25 to 40 inches.

Control section:

Clay content--Upper part averages 27 to 35 percent, the lower part averages 0 to 5 percent.

Texture--Upper part is silty clay loam or clay loam; the lower part is either extremely cobbly loamy sand, very cobbly sand or extremely gravelly sand.

Rock fragments--Upper part is 0 to 10 percent mainly pebbles, the lower part is 35 to 70 percent, mainly pebbles and cobbles.

A horizons:

Value--4 or 5 dry, 2 or 3 moist.

Chroma--1 or 2.

Other features--Strongly effervescent or violently effervescent in the upper subhorizons and slightly effervescent or noneffervescent in the lower subhorizons.

Wendane Series

The Wendane series consists of very deep, somewhat poorly drained soils that formed in mixed silty alluvium. Wendane soils are on lake plain terraces, stream terraces, and fan skirts. Slopes are 0 to 4 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Fine-silty, mixed (calcareous), mesic Aeric Halaquepts

Typical pedon: Wendane silty clay loam located in an area of map unit 781. (Colors are for dry soils unless otherwise noted.)

A1--0 to 1 inch; light gray (10YR 7/2) silty clay loam, brown (10YR 5/3) moist; strong very coarse platy structure parting to strong fine platy; slightly hard, very friable, very sticky and plastic; few very fine roots; many very fine vesicular and interstitial and common fine vesicular pores; violently effervescent; very strongly alkaline (pH 9.6); abrupt smooth boundary.

A2--1 to 3 inches; light gray (10YR 7/2) silty clay loam, brown (10YR 5/3) moist; moderate coarse platy structure parting to moderate fine platy; slightly hard, very friable, very sticky and plastic; common very fine roots; many very fine and fine vesicular and interstitial pores; violently effervescent; very strongly alkaline (pH 9.6); abrupt smooth boundary.

A3--3 to 5 inches; very pale brown (10YR 7/3) silty clay loam, yellowish brown (10YR 5/4) moist; moderate coarse platy structure parting to moderate fine platy; hard, very friable, very sticky and plastic; many very fine and few fine roots; many very fine and fine vesicular and interstitial pores; violently effervescent; very strongly alkaline (pH 9.4); abrupt smooth boundary.

A4--5 to 8 inches; very pale brown (10YR 7/3) silty clay loam, brown (10YR 5/3) moist; weak coarse platy

structure parting to moderate fine platy; hard, very friable, very sticky and plastic; many very fine, common fine and few medium roots; many very fine and fine vesicular and interstitial pores; violently effervescent; very strongly alkaline (pH 9.4); abrupt wavy boundary.

Cqk1--8 to 25 inches; very pale brown (10YR 7/3) silt loam; pale brown (10YR 6/3) moist; many medium faint yellow (10YR 7/6) mottles; weak medium prismatic structure parting to moderate medium angular blocky; hard, very friable, slightly sticky and slightly plastic; many very fine, common fine and few medium roots; many very fine and fine vesicular and interstitial pores; 10 percent hard, firm 10 to 20 millimeter diameter durinodes; violently effervescent; very strongly alkaline (pH 9.4); clear wavy boundary.

Cqk2--25 to 42 inches; white (10YR 8/2) silt loam, grayish brown (10YR 5/2) moist; common medium faint yellow (10YR 7/6) mottles; massive; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; many very fine, common fine and few medium vesicular and tubular pores; 30 percent discontinuous weak silica cementation, 30 percent hard, very firm 10 to 20 millimeter diameter durinodes; strongly effervescent; strongly alkaline (pH 9.0); clear wavy boundary.

Cqk3--42 to 50 inches; white (10YR 8/2) silt clay loam, brown (10YR 5/3) moist; common medium faint yellow (10YR 7/6) mottles; massive; slightly hard, very friable, sticky and plastic; few very fine, fine and medium roots; many very fine, common fine and few medium vesicular and tubular pores; 30 percent discontinuous weak silica cementation; 40 percent hard, firm 10 to 20 millimeter diameter durinodes; few fine lime filaments; strongly effervescent; strongly alkaline (pH 8.8); clear wavy boundary.

Cqk4--50 to 61 inches; light gray (2.5Y 7/2) silt loam, grayish brown (2.5Y 5/2) moist; common medium faint light brownish gray (2.5Y 6/2) mottles; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; common very fine, fine and medium vesicular and tubular pores; 40 percent hard, very firm 10 to 20 millimeter diameter durinodes; common fine lime filaments; strongly effervescent; strongly alkaline (pH 8.6).

Type location: Elko county, Nevada; approximately 1/2 miles southwest of Currie, about 1,200 feet north and 800 feet west of the southeast corner of section 33, T.28 N., R.64 E.; (40 degrees, 15 minutes, 23 seconds north latitude, 114 degrees, 45 minutes, 10 seconds west longitude.)

Range in characteristics:

Soil moisture: Saturated within depths of 28 to 40 inches during the spring of most years. Dry mid-summer through mid-winter moist in mid-winter, spring, and early summer. Apparent seasonal water table is between 2.5 and 4 feet between February and July. Drained phases are recognized.

Soil temperature: 47 to 52 degrees F.

Mineralogy: Mixed, but has a strong influence from volcanic ash and other pyroclastic materials.

Depth to Cqk horizon: 8 to 20 inches.

Depth to redoximorphic concentrations: 8 to 27 inches.

Salts: These soils are normally strongly saline affected in their upper profile, and slightly to strongly affected in the lower profile.

Exchangeable sodium: 15 to 70 percent in half or more of the upper 20 inches and decreases with depth.

Reaction: Moderately alkaline through very strongly alkaline.

Other features: Unconformable stratified gravelly sand or very gravelly sand are common in some pedons below 40 inches. Some pedons have Cq horizons that are noneffervescent below 40 inches.

Control section:

Clay content--20 to 30 percent, when mixed.

A horizons:

Value--6 or 7 dry, 4 through 6 moist.

Chroma--1 through 4.

SAR--30 to 55.

Cqk horizons:

Hue--10YR or 2.5Y.

Value--6 through 8 dry, 4 through 7 moist.

Chroma--1 through 4.

Texture--Stratified very fine sandy loam, silt loam, silty clay loam, and clay loam.

Structure--Thin platy or is massive. Prismatic parting to angular blocky in some subhorizons.

SAR--10 to 20.

Other features--Strata of volcanic ash that are 4 to 10 inches thick are common at some depth between 13 and 36 inches.

Thickness--13 to over 30 inches, when combined.

Cementation--10 to 40 percent weakly or strongly cemented durinodes in a friable matrix and up to 30 percent discontinuous weak silica cementation in any one horizon.

Wesfil Series

The Wesfil series consists of very shallow, well drained soils that formed in residuum and colluvium from andesite. Wesfil soils are on hills. Slopes are 2 to 50 inches. The

mean annual precipitation is about 9 inches and the mean annual temperature is about 52 degrees F.

Taxonomic class: Loamy-skeletal, mixed (calcareous), mesic Lithic Xeric Torriorthents

Typical pedon: Wesfil very channery loam located in an area of map unit 98. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 60 percent channers and 10 percent flagstones.

A--0 to 2 inches; very pale brown (10YR 7/3) very channery loam, brown (10YR 5/3) moist; weak thin platy structure; soft, very friable, slightly sticky and slightly plastic; few very fine roots; common very fine vesicular and interstitial pores; 35 percent channers; slightly effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

Bk--2 to 6 inches; pale brown (10YR 6/3) very channery loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine, few medium and coarse roots; many very fine interstitial pores; 45 percent channers; common thin lime coats on channers; slightly effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary.

R--6 inches; hard fractured bedrock.

Type location: Elko County, Nevada; approximately 8 miles southeast of White Horse Mountain; 1,450 feet north and 200 feet east of the southwest corner of section 16, T.26 N., R.69 E.; (40 degrees, 07 minutes, 15 seconds north latitude and 114 degrees, 12 minutes, 00 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry from June through early November.

Soil temperature: 53 to 57 degrees F.

Depth to the lithic contact: 4 to 10 inches.

Control section:

Clay content--12 to 18 percent.

Texture--Loam or silt loam.

Rock fragments--40 to 60 percent, mainly channers.

Reaction--Mildly alkaline or strongly alkaline.

Calcium carbonate equivalent--1 to 10 percent.

A horizon:

Hue--2.5Y or 10YR.

Value--6 or 7 dry, 4 or 5 moist.

Calcium carbonate equivalent--1 to 5 percent.

Bk horizon:

Hue--2.5Y or 10YR.

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 through 4.

Structure--Massive or subangular blocky.

Calcium carbonate equivalent--5 to 10 percent.

Wintermute Series

The Wintermute series consists of very deep, well drained soils that formed in mixed alluvium from limestone, dolomite and slate. Wintermute soils are on summits and side slopes of fan piedmont remnants, fan skirts, and beach plains. Slopes are 0 to 15 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Duric Calciorthids

Typical pedon: Wintermute gravelly silt loam, in an area of map unit 504. (Colors are for dry soils unless otherwise noted.)

A1--0 to 3 inches; pale brown (10YR 6/3) gravelly silt loam, brown (10YR 4/3) moist; moderate medium platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, few fine through coarse roots; many very fine vesicular pores; few fine lime pendants on undersides of pebbles; 25 percent pebbles; violently effervescent; strongly alkaline (pH 8.5); clear smooth boundary.

A2--3 to 8 inches; pale brown (10YR 6/3) gravelly silt loam, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and few fine through coarse roots; common very fine tubular pores; few fine lime pendants on undersides of pebbles; 15 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

A3--8 to 15 inches; pale brown (10YR 6/3) gravelly silt loam, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; slightly hard, very friable, sticky and slightly plastic; common very fine, few fine through coarse roots; common very fine tubular pores; common thin to moderately thick lime pendants on undersides of pebbles; 30 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.

2Bqk1--15 to 31 inches; very pale brown (10YR 7/3) very gravelly sandy loam, light yellowish brown (10YR 6/4) moist; massive; hard, firm, and brittle, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores; common krotovinas that are from 2 to 6 inches in diameter, pale brown (10YR 6/3) gravelly silt

loam, brown (10YR 4/3) moist, with few fine and many very fine roots; 15 percent discontinuous strong silica cementation in horizontal bands; common thin to moderately thick lime pendants on undersides of pebbles; 55 percent pebbles; violently effervescent; continuous brittle matrix; strongly alkaline (pH 8.8); abrupt wavy boundary.

2Bqk2--31 to 53 inches; pale brown (10YR 6/3) extremely gravelly loamy sand, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine roots; common very fine tubular pores and many very fine interstitial pores; 25 percent discontinuous weak lime cementation; common thin to moderately thick lime pendants on undersides of rock fragments; 65 percent pebbles, 10 percent cobbles, and 10 percent stones; violently effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary.

3C--53 to 60 inches; light yellowish brown (10YR 6/4) and pale brown (10YR 6/3) gravelly silty clay loam light yellowish brown (10YR 6/4) and dark yellowish brown (10YR 4/4) moist; massive; slightly hard, very friable, sticky and plastic; common very fine tubular pores; common fine manganese stains; common thin to moderately thick lime pendants on undersides of pebbles; 25 percent pebbles; violently effervescent; moderately alkaline (pH 8.4).

Type location: Elko County, Nevada; approximately 10 miles southwest of Currie, about 2,800 feet south and 2,100 feet west of the northeast corner of section 16, T.26 N., R.64 E.; (40 degrees, 07 minutes, 42 seconds north latitude and 114 degrees, 45 minutes, 30 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter through mid spring, dry late spring through fall.

Soil temperature: 47 to 52 degrees F.

Depth to calcic and discontinuous weak lime cementation: 8 to 20 inches.

Reaction: Moderately alkaline to strongly alkaline

Control section:

Clay content--8 to 18 percent.

Rock fragments--Average 35 to 60 percent. The upper part of the particle-size control section averages 15 to 35 percent, dominantly pebbles. The lower part averages 45 to 85 percent, of which 35 to 60 percent are pebbles and 10 to 30 percent are cobbles and stones.

A horizons:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 3 dry, 3 or 4 moist.

Bqk horizons:

Value--6 through 8 dry, 4 through 6 moist.

Chroma--3 or 4.

Texture--Stratified sandy loam and loamy sand.

Other features--Some pedons have up to 35 percent discontinuous one to three inch thick indurated or strongly silica and lime cemented layers in the lower Bqk horizons.

C horizon:

Value--6 or 7 dry, 5 or 6 moist.

Chroma--3 or 4.

Texture--Clay loam or silty clay loam.

Clay content--27 to 35 percent.

Rock fragments--15 to 35 percent, dominantly pebbles.

Xeric Torriorthents

The Xeric Torriorthents consists of very deep, well drained soils that formed in mixed alluvium on fan piedmont remnants. Slopes are 8 to 30 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Xeric Torriorthents, mesic

Typical pedon: Xeric Torriorthents gravelly sandy loam located in an area of map unit 1570. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 45 percent pebbles and 10 percent cobbles.

A--0 to 5 inches; light gray (10YR 7/2) gravelly sandy loam, brown (10YR 5/3) moist; weak very thick platy structure parting to moderate medium platy structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine interstitial pores; 25 percent pebbles; violently effervescent; strongly alkaline (pH 8.5); clear smooth boundary.

C1--5 to 11 inches; light gray (10YR 7/2) very gravelly coarse sand, brown (10YR 5/3) moist; massive, soft, very friable, nonsticky and nonplastic; common very fine, fine and few medium and coarse roots; many very fine interstitial pores; 45 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

C2--11 to 29 inches; light gray (10YR 7/2) very gravelly coarse sand, brown (10YR 5/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; common

very fine and few fine, medium, and coarse roots; many very fine and fine interstitial pores; 45 percent pebbles; strongly alkaline (pH 8.6); violently effervescent; clear smooth boundary.

C3--29 to 60 inches; light gray (10YR 7/2) stratified very gravelly coarse sand to extremely gravelly coarse sand brown (10YR 5/3) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine and fine roots; many fine interstitial pores; 45 percent pebbles and 5 percent cobbles; strongly effervescent; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; approximately 12 miles southeast of White Horse Mountain; 1,500 feet north and 2,000 feet west of the southeast corner of section 12, T.26 N., R.69 E.; (40 degrees, 08 minutes, 14 seconds north latitude and 114 degrees, 08 minutes, 00 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry summer and fall.

Soil temperature: 47 to 52 degrees F.

Control section:

Clay content--2 to 8 percent.

Carbonates--Strongly effervescent or violently effervescent throughout.

A horizon:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 3.

C horizons:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 3.

Structure--Massive or single grain.

Consistence--Soft, slightly hard, or loose.

Rock fragments--45 to 75 percent mainly pebbles.

Zafod Series

The Zafod series consists of moderately deep to a duripan, well drained soils that formed in alluvium from granite. Zafod soils are on fan piedmont remnants. Slopes are 4 to 30 percent. The mean annual precipitation is about 10 inches and the mean annual temperature is about 49 degrees F.

Taxonomic class: Loamy-skeletal, mixed, mesic Haploxerollic Durorthids

Typical pedon: Zafod gravelly coarse sandy loam in an area of map unit 1070. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 15 percent pebbles.

A--0 to 3 inches; light brownish gray (10YR 6/2) gravelly coarse sandy loam, dark brown (10YR 3/3) moist; strong thick platy structure; slightly hard, very friable, nonsticky and nonplastic; few very fine and fine roots; common very fine and fine interstitial and vesicular and few medium vesicular pores; 20 percent pebbles; strongly effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

Bk--3 to 7 inches; light brownish gray (10YR 6/2) gravelly coarse sandy loam, brown (10YR 4/3) moist; moderate very coarse subangular blocky structure parting to moderate medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine, fine and medium roots; common very fine and fine tubular pores; 15 percent pebbles; common thin lime coats on undersides of coarse fragments; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

2Bqk1--7 to 13 inches; pale brown (10YR 6/3) very cobbly coarse sandy loam, brown (10YR 4/3) moist; weak medium subangular blocky structure; soft, friable, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; few very fine and fine tubular and many very fine interstitial pores; 10 percent durinodes; 15 percent pebbles, 15 percent cobbles, and 5 percent stones; common moderately thick lime coats on undersides of coarse fragments; violently effervescent; strongly alkaline (pH 8.5); abrupt wavy boundary.

2Bqk2--13 to 28 inches; light gray (10YR 7/2) very cobbly coarse sandy loam, light brownish gray (10YR 6/2) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; many very fine interstitial and few very fine tubular pores; 50 percent discontinuous strong silica and lime cementation with discontinuous 1 millimeter thick laminar cap; common moderately thick lime coats on undersides of coarse fragments; 15 percent pebbles, 20 percent cobbles, and 5 percent stones; violently effervescent; strongly alkaline (pH 8.6); abrupt wavy boundary.

3Bqkm--28 to 38 inches; light gray (10YR 7/2) strongly cemented duripan, light brownish gray (10YR 6/2) moist; massive; very hard, very firm; roots matted in places on pan surface; violently effervescent; abrupt wavy boundary.

4C--38 to 60 inches; light gray (10YR 7/2) very gravelly coarse sand, light brownish gray (10YR 6/2) moist;

massive; hard, firm, nonsticky and nonplastic; few very fine and fine roots; common very fine interstitial pores; 10 percent discontinuous weak silica cementation; 25 percent pebbles, 5 percent cobbles, and 5 percent stones; few thin lime coats on undersides of coarse fragments; violently effervescent; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; about 3 1/4 miles southeast of Highway 93A in the south end of Antelope Valley; approximately 1,000 feet east and 1,800 feet north of the southwest corner of section 28, T.28 N., R.68 E.; (40 degrees, 16 minutes, 00 seconds north latitude and 114 degrees, 18 minutes, 37 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist late fall through early summer, dry late July through October except for 10 to 20 days cumulative between July and October due to convection storms.

Soil temperature: 47 to 52 degrees F.

Depth to duripan: 20 to 40 inches.

Control section:

Clay content--5 to 15 percent.

Rock fragments--Averages 35 to 70 percent.

A horizon:

Value--5 or 6 dry, 3 through 5 moist.

Chroma--2 through 4.

Other features--Slightly effervescent to strongly effervescent.

Bk horizon:

Value--5 through 7 dry, 4 or 5 moist.

Chroma--2 through 5 dry, 3 through 6 moist.

Texture--Sandy loam, coarse sandy loam.

Consistence--Nonplastic to slightly plastic.

Clay content--5 to 15 percent.

Rock fragments--15 to 35 percent.

Other features--Strongly effervescent or violently effervescent. Some pedons contain 0 to 10 percent durinodes.

2Bqk horizons:

Value--6 through 8 dry, 4 through 7 moist.

Chroma--2 through 4.

Rock fragments--35 to 70 percent, mainly detached pan fragments.

Structure--Subangular, angular blocky or massive.

Consistence--Firm to friable moist, nonsticky to slightly sticky and nonplastic to slightly plastic wet.

3Bqkm horizon:

Value--7 or 8 dry, 4 through 7 moist.

Chroma--2 through 4.

4C horizon:

Value--6 or 7 dry, 4 through 6 moist.

Chroma--2 through 4.

Texture--Coarse sandy loam, sandy loam or coarse sand.

Consistence--Hard or very hard dry, and firm or very firm moist.

Clay content--2 to 15 percent.

Rock fragments--15 to 35 percent, mainly pebbles.

Reaction--Moderately alkaline or strongly alkaline.

Other features--Strongly effervescent or violently effervescent.

Zerk Series

The Zerk series consists of very deep, well drained soils that formed in mixed alluvium. Zerk soils are on offshore bars, fan piedmont remnants, inset fans, and beach plains. Slopes are 0 to 8 percent. The mean annual precipitation is about 7 inches and the mean annual temperature is about 47 degrees F.

Taxonomic class: Sandy-skeletal, mixed, mesic Duric Calciorthids

Typical pedon: Zerk gravelly loam located in an area of map unit 614. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 20 percent pebbles.

A--0 to 2 inches; light gray (10YR 7/2) gravelly loam, dark brown (10YR 4/3) moist; weak medium platy structure; soft, very friable, nonsticky and nonplastic; few very fine, fine, and few medium roots; many very fine and fine interstitial pores; 20 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

Bk--2 to 16 inches; very pale brown (10YR 7/3) gravelly loam, light yellowish brown (10YR 6/4) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine and few medium roots; many very fine and fine interstitial pores; 15 percent pebbles; violently effervescent (10 percent calcium carbonate equivalent of the less than 2 millimeter fraction); strongly alkaline (pH 8.6); abrupt wavy boundary.

Bqk1--16 to 28 inches; white (10YR 8/2) extremely gravelly loamy sand, very pale brown (10YR 7/4) moist; massive; hard, friable, nonsticky and nonplastic; few very fine roots; many very fine and fine interstitial pores; 70 percent discontinuous weak lime and silica

cementation; 60 percent pebbles; violently effervescent (35 percent calcium carbonate equivalent of the less than 2 millimeter fraction); moderately alkaline (pH 8.4); clear smooth boundary.

Bqk2--28 to 60 inches; white (10YR 8/2) extremely gravelly coarse sand, yellow (10YR 7/6) moist; few pockets of very pale brown (10YR 7/3) coarse sand, dark yellowish brown (10YR 4/6) moist; massive; hard, friable, nonsticky and nonplastic; many very fine and fine interstitial pores; 60 percent discontinuous weak lime cementation and 10 percent 1 to 2 millimeter lime and silica coats and pendants on undersides of rock fragments; 70 percent pebbles and 10 percent cobbles; strongly effervescent (20 percent calcium carbonate equivalent of the less than 2 millimeter fraction); moderately alkaline (pH 7.9).

Type location: Elko County, Nevada; approximately 10 miles northeast of Currie; located in unsectionized area about 950 feet east and 700 feet south of the northeast corner of section 12, T.29 N., R.64 E.; (40 degrees, 24 minutes, 43 seconds north latitude and 114 degrees, 41 minutes, 24 seconds west longitude.)

Range in characteristics:

Soil moisture: Moist in winter and spring, dry in summer and fall.

Soil temperature: 47 to 51 degrees F.

Depth to calcic horizon: 2 to 8 inches.

Depth to brittle horizon: 10 to 18 inches.

Control section:

Clay content—Averages 1 to 12 percent.

Rock fragments—Averages 60 to 80 percent.

Reaction--Moderately alkaline or strongly alkaline.

A horizon:

Value--6 or 7 dry, 4 or 5 moist.

Chroma--2 or 3, dry or moist.

Bk horizon:

Value--5 through 8 dry, 4 through 6 moist.

Chroma--3 through 6, dry or moist.

Texture—Gravelly loam or very gravelly loam, with more than 50 percent fine sand or coarse sand.

Clay content—12 to 17 percent.

Rock fragments—15 to 50 percent.

Consistence--Soft to hard dry, friable to very friable moist, and nonplastic to plastic wet.

Calcium carbonate equivalent—10 to 20 percent.

Bqk1 horizon:

Value--6 through 8 dry, 5 through 7 moist.

Chroma--2 through 6, dry or moist.

Texture—Stratified extremely gravelly loamy sand to extremely gravelly coarse sand.

Clay content—0 to 10 percent.

Rock fragments—60 to 80 percent.

Cementation--20 to 70 percent discontinuous weakly to strongly silica and carbonate cemented strata.

Strata are firm and brittle when moist.

Calcium carbonate equivalent—15 to 35 percent.

Bqk2 horizon:

Value--5 through 8 dry, 4 or 7 moist.

Chroma--3 or 6, dry or moist.

Texture—Stratified extremely gravelly loamy sand to extremely gravelly coarse sand.

Clay content—0 to 10 percent.

Rock fragments—60 to 80 percent.

Cementation—10 to 60 percent discontinuous weakly to strongly silica and carbonate cemented strata.

Calcium carbonate equivalent—15 to 35 percent.

Zimbob Series

The Zimbob series consists of very shallow or shallow, well drained soils that formed in residuum and colluvium from limestone and dolomite. Zimbob soils are on hills. Slopes are 8 to 50 percent. The mean annual precipitation is about 14 inches and the mean annual temperature is about 45 degrees F.

Taxonomic class: Loamy-skeletal, carbonatic, mesic
Lithic Xeric Torriorthents

Typical pedon: Zimbob very gravelly loam located in an area of map unit 975. (Colors are for dry soil unless otherwise noted.) The soil surface is partially covered by approximately 60 percent pebbles, 5 percent cobbles, and 1 percent stones.

A--0 to 2 inches; light gray (10YR 7/2) very gravelly loam, brown (10YR 5/3) moist; moderate thin platy parting to weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and plastic; few very fine roots; many very fine and few fine pores; 50 percent pebbles; violently effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bw--2 to 7 inches; very pale brown (10YR 7/3) very gravelly loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, few fine, medium and coarse roots; common very fine

pores; 35 percent pebbles; violently effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

Bk--7 to 11 inches; very pale brown (10YR 7/4) very gravelly loam, brown (10YR 5/3) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, few fine, medium and coarse roots; few very thin lime coats on undersides of pebbles; 40 percent pebbles; violently effervescent; strongly alkaline (pH 8.8); abrupt wavy boundary.

R--11 inches; limestone.

Type location: Elko County, Nevada; approximately 16 miles northeast of Currie in the Pequop Mountains; located in an unsectionized area about 4.5 miles north and 1.9 miles east of the northeast corner of section 1, T.29 N., R.64 E.; (40 degrees, 29 minutes, 38 seconds north latitude and 114 degrees, 39 minutes, 25 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, moist in winter and spring, dry summer and fall.

Soil temperature: 47 to 52 degrees F.

Depth to bedrock: 4 to 14 inches.

Reaction: Moderately alkaline or strongly alkaline.

Control section:

Clay content--10 to 18 percent.

Rock fragments--Averages 35 to 50 percent, mainly pebbles.

Calcium carbonate equivalent--50 to 70 percent.

A horizon:

Value--6 or 7 dry, 3 through 5 moist.

Chroma--2 through 4 moist or dry.

Bw horizon:

Value--6 or 7 dry, 4 or 5 moist

Chroma--2 through 4.

Texture--Sandy loam.

Consistence--Soft or slightly hard dry, very friable or friable moist.

Bk horizon:

Value--5 through 7 dry, 4 or 5 moist.

Chroma--2 through 4.

Texture--Loam or sandy loam.

Secondary carbonates--Few or common very thin coats on the undersides of rock fragments.

Other features--Up to a 2 inch thick subhorizon above the bedrock with few, thin patchy lime-silica coats on undersides of rock fragments is common in some pedons.

Zorravista Series

The Zorravista series consists of very deep, excessively drained soils that formed in mixed aeolian material.

Zorravista soils are on dunes, barrier bars, and sand sheets. Slopes are 2 to 15 percent. The mean annual precipitation is about 9 inches and the mean annual temperature is about 48 degrees F.

Taxonomic class: Mixed, mesic Xeric Torripsamments

Typical pedon: Zorravista loamy fine sand located in an area of map unit 1215. (Colors are for dry soil unless otherwise noted.)

A--0 to 6 inches; light gray (10YR 7/1) loamy fine sand, light brownish gray (10YR 6/2) moist; weak medium platy structure parting to weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; few fine roots; strongly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

C1--6 to 26 inches; light gray (10YR 7/1) fine sand, light brownish gray (10YR 6/2) moist; single grain; loose; common very fine, few fine and medium roots; strongly effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

C2--26 to 60 inches; light gray (10YR 7/1) fine sand, light brownish gray (10YR 6/2) moist; single grain; loose; few fine roots; strongly effervescent; strongly alkaline (pH 8.6).

Type location: Elko County, Nevada; approximately 14 miles southeast of Oasis; located in an unsectionized area about 1 1/4 miles east and 2,000 feet south of Shafter, T.34 N., R.67 E.; (40 degrees, 51 minutes, 00 seconds north latitude and 114 degrees, 25 minutes, 04 seconds west longitude.)

Range in characteristics:

Soil moisture: Usually dry, dry mid spring through fall, moist winter and early spring.

Soil temperature: 47 to 52 degrees F.

Control section:

Clay content--Less than 5 percent.

Other features--Effervescent to at least 20 inches.

A horizon:

Hue--10YR, 2.5Y.

Value--6 or 7 dry, 3 through 6 moist.

Chroma--1 through 4.

Reaction--Moderately alkaline or strongly alkaline.

Structure--Single grain or platy.

Effervescence--Slightly effervescent or strongly effervescent.

C horizons:

Value--5 through 8 dry, 3 through 6 moist.

Chroma--1 through 4.

Hue--10YR or 2.5Y.

Consistence--Soft to slightly hard or loose dry, very friable or loose moist.

Texture--Fine sand, sand, or loamy fine sand.

Clay content--Less than 5 percent in the upper part.

Structure--Single grain or massive.

Reaction--Mildly alkaline through strongly alkaline.

Effervescence--Noneffervescent to strongly effervescent.

Other features--Some pedons contain lacustrine lake sediments below 44 inches.

Formation of the Soils

Soil is a natural three dimensional body on the earth's surface which is capable of supporting plants. It is a dynamic mixture of mineral material, organic matter, water, and air. Each soil has distinctive properties that are the product of environmental forces acting upon earthy material over a period of time.

Many different kinds of soils exist in the soil survey area within relatively short distances. These differences are the result of the interaction of biological forces; climate; relief; parent material; and time. These factors form the ecosystem of soil genesis (13).

The soil-forming factors interrelate to develop soil horizons that have specific properties. The age and strength of expression of the horizons is determined by the amount of weathering of the parent material. Weathering is the result of the interaction of moisture, temperature, and biological activity as influenced by time. The kinds and combinations of horizons and other diagnostic properties and their strength of expression provide clues as to the age of the soils in the area (28, 29). Diagnostic horizons present in the soils include mollic epipedons; cambic, argillic, and silica-cemented horizons.

Mollic epipedons are thick, dark surface horizons that have high base saturation. They form in areas where organic matter accumulates faster than it is oxidized. The organic matter is added to the soil in the form of decomposed roots and organic residue from the surface. When conditions are favorable, mollic epipedons can form in 100 to 1,000 years. They are the only diagnostic horizons in younger soils, but they occur in combination with other diagnostic horizons in older soils.

Cambic horizons in this survey area are identified by a redistribution of soluble salts and carbonates to a lower position in the soil profile, oxidation of the B horizon, and alteration of the original parent material to platy or blocky structure. Cambic horizons in northeastern Nevada generally are thought to be about 5,000 to 10,000 years old. This age has been determined mostly from soil mapping in areas near Lake Lahontan and other Pleistocene lakes (12, 14, 16, 17). Cambic horizons also

are present in soils that have a thin layer of Mount Mazama ash in the profile.

Argillic horizons are subsurface horizons that consist of illuvial clay accumulations. Prominent argillic horizons in this area commonly are in soils that formed on surfaces of Wisconsin and pre-Wisconsin age and in parent materials other than limestone and other similar rocks (5, 10, 11, 12, 15, 29). Generally, as argillic horizons age they become finer in texture and somewhat thicker and tend to develop an abrupt upper boundary.

Volcanic glass in deposits derived from pyroclastic material and in eolian deposits is a source of silica that results in the formation of durinodes and duripans in many of the soils in the survey area. Duripans are massive horizons that are cemented with silica and in this area usually with accessory calcium carbonate. Soils of the Holocene that developed in deposits that have a high content of volcanic ash commonly have weakly to moderately cemented horizons that contain a large amount of amorphous siliceous material. This silica cementation can form in a relatively short period of time and is probably less than 7,000 years old. Platy or laminated duripans and thin discontinuous laminar duripans tend to develop in loamy material. Duripans capped with silica-cemented laminar layers probably are the oldest ones in the area and are of early Wisconsin and pre-Wisconsin age, as evidenced by their association with prominent argillic horizons in some areas.

The overall landscape of the area, which is mainly mountains and valleys, is the result of geologic, stratigraphic, and structural control. The present topography and landforms, however, are primarily the result of events that occurred during the Quaternary. The kind of soils that formed are indicative of the stability and age of the surface of the landforms on which they occur. The degree of development of diagnostic horizons in the soils indicates a range in age from Holocene to pre-Wisconsin. The many kinds of soils in the area are a direct result of this range in age.

Living Organisms

Plants, animals, insects, and microflora are important biological forces that affect soil formation in the survey area. Although mammals, such as badgers and ground squirrels, and insects, such as cicadas and ants, have had some effect on soil development, plants appear to have had the major biological influence on the soils in this survey area.

Vegetation is particularly important as it affects soil erosion. Where vegetation is sparse there is little cover and a higher rate of geological erosion occurs.

Because of climatic differences, plants vary considerably in kinds and amounts as elevation increases. On the flood plains and lake plains, where drainage is restricted, the dense meadow vegetation has supplied the organic matter necessary for the development of Cumulic Endoaquolls (Welch series), on flood plains and Typic Endoaquolls (Kolda series) on lake plains, both of which have a dark A horizon.

On fan piedmonts, fan skirts, alluvial flats, and lake plains at the lower elevations, the dominant plants are drought and salt-tolerant shrubs (24). Because of the scarcity of available moisture, the plant cover in these areas is sparse. As a result, little organic matter is added to the soils and little protection from the wind and sun is provided. Salts have been moved from the lower layers to the upper layer by the salt-tolerant shrubs. An example of soils that formed in these areas are Typic Torriorthents (Benin series) on lake plains.

Fan piedmonts, fan skirts, and foothills at the higher elevations support a plant cover of shrubs and grasses. The density of these plants is somewhat greater; therefore, moderate amounts of organic matter have accumulated in the A horizon. Soluble salts are present at a greater depth in the profile. Examples of soils that formed in these areas are Haploxerollic Durorthids (Shabliss series) on fan piedmonts and Lithic Xerollic Calciorthids (Tecomar series) on hills.

The mountainous areas generally support a denser stand of shrubs, grasses, and in some places, trees. Because of the more abundant vegetation, the A horizons of the soils in these areas are thicker, higher in organic matter, and darker in color. An example of soils formed in this vegetation type are Calcic Pachic Cryoborolls (Hardol series) and Typic Calcixerolls (Cavehill series).

Climate

The major climatic forces that influence soil formation are precipitation and temperature. Recent soils

developed under the present climate, but soils that developed before the Holocene were subject to different climatic conditions. Morrison and Frye (16, 17, 18, 19) suggest that accelerated soil formation occurs during unique climatic periods, but the climatic conditions between these periods is not conducive to soil formation.

The present desert climate began at the start of the Pleistocene (4), but both precipitation and temperature have fluctuated greatly. The present climate is characterized by warm, dry summers and cool, moist winters. Precipitation is strongly influenced by the north-south trending mountain ranges, and increases as elevation increases. The average annual precipitation ranges from about 4 inches at the lowest elevations in the Wendover area to about 25 inches or more at the highest elevations in the Cherry Creek, Pequop, and Goshute ranges. Most of the precipitation falls in winter and spring, except in Pilot Creek Valley and the Wendover area where precipitation is distributed fairly evenly throughout the year.

The average annual air temperature ranges from 53 degrees F. at lower elevations in the Wendover area to 41 degrees F. or less in some of the higher mountain ranges. In winter, freezing and thawing generally occur throughout the survey area, except in those areas that are insulated by snow cover. This frost action causes heaving of plants, development of miniature rings and rock stripes, and erosion as a result of solifluction. At some of the higher elevations, bedrock has been fractured and displaced as a result of freezing and thawing.

Major climatic variations are a result of the effects of topography and relief. Temperature decreases and precipitation increases as elevation increases. The soils in the survey area generally are divided into climatic zones according to elevation and longitudinal location. As the precipitation increases, the removal of soluble salts and the production of native vegetation increase, which results in a cycling of bases and an increase in organic matter. Fluctuations in temperature and moisture affect the rates of organic matter accumulation and decomposition and the rate of weathering of minerals (6).

At elevations of 4,300 to 5,700 feet, the average annual precipitation is about 5 to 8 inches and the average annual air temperature is about 48 to 52 degrees. In these warm, arid areas, no surplus moisture is available to percolate. Chemical weathering of parent material is slow, soluble salts remain in the upper part of the soil profile, and eluviation and illuviation occur very slowly. The plant cover is sparse and consists mainly of drought- and salt-tolerant shrubs. Typically, the soils are low in organic matter content and have a thin, light-

colored A horizon. Soluble salts and calcium carbonate accumulate in the soil profile at a relatively shallow depth. Typic Calciorthids (Gravier series) and Typic Torriorthents (Katelana series) are examples of soils that formed in this climatic zone.

At elevations of 5,700 to 7,000 feet, the average annual precipitation is about 10 inches and the average annual air temperature is about 47 degrees. In these warm, semiarid areas, the plant cover is thicker than at the lower elevations and consists mainly of drought-tolerant shrubs and grasses. Chemical weathering of parent material occurs slowly. Calcium carbonate and silica accumulate somewhat lower in the profile. Typically, the soils are moderately low in organic matter content. They have a thin, relatively dark A horizon or a thicker, light-colored A horizon and a thicker calcic or cambic horizon over accumulations of silica and/or carbonates. Durixerollic Calciorthids (Automal series) and Lithic Xerollic Calciorthids (Tecomar series) on foothills are examples of soils that formed in this climatic zone.

At elevations of 7,000 to 8,000 feet, the average annual precipitation is about 12 to 14 inches and the average annual air temperature is about 43 to 46 degrees. In these cool, semiarid areas the increased precipitation and decreased evapotranspiration rate result in stands of singleleaf pinyon and Utah juniper with localized areas of shrubs and perennial grasses. Because of the lower temperatures, organic matter decomposes at a slower rate and accumulates in the A horizon. Chemical weathering is moderate in the climatic zone. Typically, the soils have a dark mollic epipedon and a strongly developed calcic horizon in the subsoil. Typic Calcixerolls (Cavehill series) and Lithic Calcixerolls (Onkeyo series) are examples of soils that formed in this climatic zone.

At elevations of as much as 10,200 feet, the average annual precipitation is about 16 to more than 20 inches and the average annual air temperature is about 41 to 43 degrees. These cold areas include windswept crests and steep side slopes of mountains where drifted snow accumulates. Most calcium carbonate and some exchangeable cations have been removed to the lower subsoil resulting in a base saturation that generally is lower than in other climatic zones. Organic matter decomposes slowly, and a thick, dark A horizon forms. Areas where drifted snow accumulates support thick mountain shrubs and grasses. Windswept areas receive less effective precipitation, which is reflected in lower plant production. Soils on stable, north-facing, concave side slopes in areas where snow accumulates may be older than their degree of development indicates because they remain cold for most of the year, which inhibits development. During glacial periods these soils may have remained frozen or under snow cover

throughout the year. Pachic Calcixerolls (Wardbay series) on side slopes of mountains and Lithic Cryoborolls (Adobe series) on windswept crests of mountains are examples of soils that formed in this climatic zone.

Relief

Relief is the shape of the landscape. It is determined by the position of the water table, percent of slope, length of slope, shape of slope (convex or concave), and exposure to wind and sun. Any activity on a slope that affects the soil, including erosion and deposition, affects soil formation (13).

The landscapes in this area are dominated by nearly parallel mountain ranges rising abruptly from broad alluvium-filled valleys. Fan piedmonts and fan skirts slope downward from the mountains until they merge with alluvial flats and lake plains (24).

The mountain ranges mainly are characterized by excessive relief. The soils in these positions are well drained. Runoff is rapid or very rapid, and the hazard of erosion is severe. Mountain slopes that are only partially stabilized are subject to a high rate of geologic erosion, and soil development on these slopes primarily is limited to an accumulation of organic matter that forms a mollic epipedon. Cryic Lithic Rendolls (Haunchee series) and Lithic Haploxerolls (Hendap series) are examples of soils on these slopes. Soil formation has been unable to act on parent material long enough for cambic, calcic, or argillic horizon to form in these soils. Mountain slopes that are more stable are subject to a slower rate of geologic erosion, and a calcic or argillic horizon has formed in the soils on these slopes. Pachic Calcixerolls (Wardbay series) and Aridic Argixerolls (Sumine series) are examples.

Most of the foothills and mountains exhibit pronounced aspect-related differences in microclimate. Some soils on north-facing slopes at the lower elevations are similar to soils on south aspects at the higher elevations (6, 13).

Fan piedmonts flank the mountain ranges. The soils in these positions are well drained. Runoff is slow or medium and the hazard of erosion is slight or moderate. The fan piedmonts typically are dissected because the stream channel has been altered as a result of changes in climate or local faulting. This dissection has resulted in the formation of smooth areas of the summits of fan piedmont remnants, younger side slopes of fan piedmont remnants, and very young inset fans along drainageways. Xerollic Durorthids (Palinor series) and Haploxerollic Durorthids (Shabliss series) are examples of soils on the summits of fan piedmont remnants.

Durixerollic Calciorthids (Automal series) are examples of soils on the side slopes of fan piedmont remnants, and Xeric Torriorthents (Linoyer series) are examples of soils on inset fans.

Fan skirts are extensive in this area. They border the fan piedmonts and extend to the alluvial flats. The soils in these positions are well drained. Runoff is slow or medium, and the hazard of erosion is slight or moderate. These surfaces are relatively smooth and are not dissected. Xeric Torriorthents (Linoyer series) and Durixerollic Calciorthids (Kunzler series) are examples of soils on fan skirts.

The soils on the nearly level axial-stream flood plains along the Franklin River and in the Franklin and Ruby Lake areas are poorly drained or very poorly drained. Runoff is very slow or ponded. Areas of these soils are subject to flooding, and some areas are subject to deposition. The soils in these areas support dense stands of meadow vegetation that contributes large amounts of organic matter; thus, these soils have a thin to thick, dark A horizon. Some of these soils have excess soluble salts in the upper horizons. Typic Endoaquolls (Kolda series) and Typic Calciaquolls (Logan series) are examples of soils in these positions.

Parent Material

Parent material is the weathered rock or unconsolidated material from which soils form. The hardness, grain size, and porosity of the parent material and its mineralogic and chemical composition greatly influence soil formation. The parent material in this survey area is mainly material derived from sedimentary rock and associated metamorphic rock, material derived from intrusive and extrusive volcanic rock, and colluvium, alluvium, lacustrine sediment, and eolian material.

Calcareous sedimentary rock is the dominant rock type in the mountains of the survey area. In most areas of the mountains the soils have only been stable long enough to form a calcic horizon and in some areas a dark A horizon. Lithic Xerollic Calciorthids (Pookaloo series) and Pachic Calcixerolls (Wardbay series) are examples of these soils.

Late Tertiary sedimentary rock occurs scattered throughout the survey area. This material consists of older alluvium and lakebed deposits derived from interbedded tuffaceous shale, diatomaceous shale, siltstone, sandstone, and conglomerate. The lakebed deposits are severely dissected and resemble low, rolling hills. The summits have been actively eroding and are too unstable for an argillic horizon to form. Xeric

Torriorthents (Hundraw and Holborn series) are examples of soils on these areas.

Volcanic rock which is not extensive in the area includes andesite, rhyolite, ashflow tuff, basalt, and small, localized areas of granite. This rock contains large amounts of minerals that weather to clay; therefore, most of the soils that formed in this material on stable landforms have an argillic horizon. Lithic Argixerolls (Chen series) and Aridic Argixerolls (Sumine series) are examples.

The colluvium, alluvium, and basin fill material in adjacent valleys are derived mainly from calcareous sedimentary rock. The soils in the valleys throughout the area are strongly influenced by pyroclastic material from loess.

Colluvium has accumulated on steep mountain slopes as a result of gravitational forces and mass wasting. The colluvium generally is poorly sorted and contains many rock fragments. Many of these areas have not been stable long enough for an argillic horizon to form. Calcic Pachic Cryoborolls (Hardol series) is an example of soils that formed in colluvium on steep mountain slopes.

Alluvium derived from various kinds of rock and deposited as fan piedmonts is mostly loamy and contains pebbles, cobbles, and stones. It is porous, and may contain minerals that weather to clay, and contains soluble silica and calcium carbonate that results in the cementation of horizons. Xerollic Durorthids (Palinor series) and Xerollic Durargids (Hunnton series) are examples of soils that formed on stable fan piedmonts.

Alluvium deposited as fan skirts below the fan piedmonts consists of loamy and silty material mixed with loess that is high in content of volcanic ash. Some of these soils may have horizons that are weakly cemented with silica and calcium carbonate. Some localized areas along drainageways contain pebbles, cobbles, and stones. Examples of soils that formed on fan skirts are Durixerollic Calciorthids (Kunzler series) and Durorthidic Xeric Torriorthents (Okan series).

Sandy eolian material is of limited extent in this survey area. Typic Torripsamments (Kawich series) which formed in wind-active areas on semistabilized dunes and on dunes superimposed over beach plains and lake plains, are examples of soils that formed in this material.

Lacustrine sediments deposited in pluvial lakes that occupied most of the valley floors consists of silty and clayey material. Soluble salts are common in most of these soils. These soils are young and exhibit limited soil development. Typic Torriorthents (Katelana series) and Xeric Torriorthents (Sheffit series) are examples.

Areas of reworked sand and gravel deposited on pluvial beaches occur throughout the survey area prominently marking the pluvial high lake stands. These

deposits are relatively unchanged except for a thin mantle of eolian dust and in some areas a weakly developed calcic horizon. Examples of these soils are Typic Torriorthents (Izamat series) and Xerollic Calciorthids (Threesee series).

Time

Time is required for the weathering of rocks and minerals and the formation of soil horizons. The interaction of time and other soil-forming factors is not well understood by soil scientists and geologists working in this field. Some suggest that the weathering of parent material and the development of soil profiles essentially have been continuous and at a constant rate throughout the Quaternary (21, 22, 26, 29). Recently, however, geologists concerned with differentiating Quaternary deposits have suggested that soil development has not proceeded continuously at the same rate but has taken place intermittently at rapid rates (16, 17, 18, 25).

The present desert climate began at the start of the Pleistocene (4), but precipitation and temperature have fluctuated greatly. During cooler and wetter glacial periods, or pluvial, the rate of runoff increased, resulting in increased erosion, mass wasting, and deposition. These conditions reduced the rate of evaporation in the basins, and permanent lakes developed on the bolson floors. A change to a cool, drier climate at the beginning of the interglacial periods commonly was marked by maximum eolian activity. Following this was a warm, dry period and then a warm, wet period, which was most conducive to soil development (3, 5, 17). These periods of peak soil development occurred worldwide; therefore, the profiles of soils that formed in different regions during these periods can be correlated and are similar in age.

The peak soil-forming periods generally followed periods of increased erosion and deposition. During these periods, the land surfaces stabilized and the climate was favorable for a greatly accelerated rate of chemical weathering. Geologists have developed a technique of mapping soils called soil stratigraphy that uses weathering profiles to differentiate and correlate Quaternary deposits. Researchers have found soils in other parts of Nevada that are similar in age to those that formed on stratigraphic surfaces identified by Morrison (5, 12, 15). Comparing soils in this survey area with similar soils in other areas has helped to identify local soils that are similar in age. Although soils developed during each peak soil-forming period, representative profiles have eroded away or have been covered by subsequent depositions in some areas. Because of this, gaps occur in the time-soil profile sequence. In the

following paragraphs, some of the time-stratigraphic ages as set forth by Birkeland are discussed (6). These include the Holocene, Wisconsin, and pre-Wisconsin ages.

Holocene--Volcanic ash and eolian material, presumed to be from Mount Mazama ashfalls, are the main sources of soluble silica that forms durinodes and weakly developed duripans in the soils of the survey area. Thin stratas of this material are in some of the soils on fan skirts, alluvial flats, flood plains, and lake plains (27).

Hawley and Wilson (12) proposed that a distinct Mount Mazama volcanic ash bed (7) along the Humboldt River overlies late Wisconsin deposits and is the boundary between the Pleistocene and Recent soils in the Winnemucca area. This widely spread volcanic ash bed extends into Elko County and is interbedded with floodplain deposits along the Humboldt River and with young alluvium and lacustrine sediments in valleys of this survey area.

The youngest soils in the area are those that formed in recently aggraded material or in material recently exposed by erosion. These soils have no diagnostic horizons, and they resemble the original parent material. Among these are Xeric Torriorthents (Linoyer series) that formed in recent alluvium, Typic Torripsamments (Kawich series) that are subject to eolian activity and are on semistabilized sand dunes and superimposed over beach plains, and Lithic Xeric Torriorthents (Izar series) and shallow Xeric Torriorthents (Hundraw series) that formed in material weathered from Tertiary sediment on low, rolling hills where geologic erosion has been active.

Stable Holocene land surfaces that are 2,000 to 8,000 years old are extensive in the survey area (9, 11). The soils that formed on these surfaces have a calcic or a cambic horizon and are cemented with silica in some areas. These soils are on inset fans, beach plains, and hills. Examples are Xerollic Calciorthids (Threesee series) on beach plains, Durixerollic Camborthids (Kelk series) on inset fans, and Lithic Xerollic Calciorthids (Pookaloo series) on hills and mountains.

The landscape in some areas is less stable and was stripped by erosion during the late Wisconsin period exposing a relict duripan. Following redeposition during the mid to early Holocene, thin layers of loess and loamy alluvium from surrounding areas covered these relict subsurface horizons. Soil development in this material is minimal. Xerollic Durorthids (Chiara series) and Haploxerollic Durorthids (Shabliss series) on fan piedmonts are examples of soils that developed in this material.

Wisconsin.--Deposits of Wisconsin age are widely distributed in the survey area. Early Wisconsin deposits

on fan and stream terraces generally are more extensive and coarser than those of the late Wisconsin and early Holocene. A widespread veneer of loess covered these coarse deposits during the mid-Wisconsin. Typically, these deposits are on the higher geomorphic surfaces and are dissected. Morrison (18) proposed that a weathering profile, the Churchill soils in the Lake Lahontan area, be used to differentiate early Wisconsin from late Wisconsin deposits. Hawley and Wilson (12) tentatively correlated a soil of similar age in the Winnemucca area. Soils in the survey area that consist of loess-influenced alluvium over coarse alluvium have characteristics similar to those of the soils correlated in the Winnemucca area. Examples of these soils are Durixerollic Calciorthids (Automal series) and Duric Calciorthids (Wintermute series). They are considered to be mid-Wisconsin age.

Stable mid-Wisconsin land surfaces that formed in volcanic, igneous or non-calcareous sedimentary rocks are very limited in this survey area. The soils on these surfaces have a dominantly fine-loamy or loamy-skeletal argillic horizon. Examples of these soils are Durixerollic Haplargids (Nevador series) on fan piedmonts, Lithic Argixerolls (Upatad series) on hills and Aridic Argixerolls (Sumine series) on mountains.

Stable mid-Wisconsin to early Wisconsin land surfaces that formed in alluvium from calcareous sedimentary rocks are extensive in this area. They have strongly developed calcic horizons and indurated duripans cemented with accessory calcium carbonate. Xerollic Durorthids (Palinor series) is an example of these soils on fan piedmonts.

Stable early Wisconsin land surfaces are very limited in this area. These soils have a well developed argillic horizon and a indurated duripan. They are on the older land surfaces where the original subsurface horizons have not been eroded or deeply buried by sediment. Aridic Durixerolls (Stampede series) and Xerollic Durargids (Hunnton series) are examples of these soils on fan piedmonts. Lithic Argixerolls (Chen series), which have a clayey-skeletal argillic horizon and formed in residuum, are examples of these soils on mountains.

Stable pre-Wisconsin land surfaces occur only in the north end of Ruby Valley and on the west side of Clover Valley. These surfaces have been deeply dissected and are on fan piedmont remnants and partial ballenas bordering mountain slopes. Because these surfaces have been relatively stable since they were dissected, the soils that developed on them are considered to be the oldest in the survey area. Abruptic Aridic Durixerolls (Donna series) and Typic Paleixerolls (Secrepass series) are examples of soils on fan piedmont remnants and partial ballenas.

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Glossary

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alkali (sodic) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Alluvial cone. The material washed down the sides of mountains and hills by ephemeral streams and deposited at the mouth of gorges in the form of a moderately steep, conical mass descending equally in all directions from the point of issue.

Alluvial fan. The fanlike deposit of a stream where it issues from a narrow valley upon a plain, or of a tributary stream near or at its junction with its main stream.

Alluvial flat. A nearly level, graded, alluvial surface in bolsons and semi-bolsons. Commonly, an alluvial flat does not manifest terraces or floodplain levels.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Alpha,alpha-dipridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Area reclaim (in tables). An area difficult to reclaim after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Argillite. Weakly metamorphosed mudstone or shale.

Arroyo. The flat-floored channel of an ephemeral stream, commonly with very steep to vertical banks cut in alluvium.

Aspect. The direction in which a slope faces.

Association, soil. A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity).

The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3.5
Low	3.5 to 5
Moderate	5 to 7.5
High	more than 7.5

Avalanche chute. The track or path formed by an avalanche.

Back slope. The geomorphic component that forms the steepest inclined surface and principal element of many hillsides. Back slopes in profile are commonly steep, are linear, and may or may not include cliff segments.

Backswamp. A floodplain landform of extensive, marshy, or swampy, depressed areas of flood plains between natural levees and valley sides or terraces.

Badland. Steep or very steep, commonly nonstony, barren land dissected by many intermittent drainage channels. Badland is most common in semiarid and arid regions where streams are entrenched in soft geologic material. Local relief generally ranges from 25 to 500 feet. Runoff potential is very high, and geologic erosion is active.

Ballena. A fan remnant having a distinctively-rounded surface of fan alluvium. The ballena's broadly rounded shoulders meet from either side to form a narrow summit and merge smoothly with concave, short pediments which form smoothly-rounded drainageways between adjacent ballenas. A partial ballena is a fan remnant large enough to retain some relict fan surface on a remnant summit.

Barrier beach. A wide gently sloping portion of a bolson floor comprising numerous, parallel, relict longshore-bars and lagoons built by a receding pluvial lake.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, K), expressed as a percentage of the total cation-exchange capacity.

Basin floor. A general term for the nearly level, lowermost part of intermontane basins (i.e., bolson, semi-bolsos). The basin floor includes all of the alluvial, eolian, and erosional landforms below the piedmont slope.

Beach terrace. The relict shorelines from pluvial lakes, generally restricted to valley sides.

Bedding planes. Fine strata, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediment.

Bedding system. A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bench terrace. A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Blowout. A shallow depression from which all or most of the soil material has been removed by wind. A blowout has a flat or irregular floor formed by a

resistant layer or by an accumulation of pebbles or cobbles. In some blowouts, the water table is exposed.

Board foot. A unit of measure of the wood in lumber, logs, or trees. The amount of wood in a board one foot wide, one foot long, and one inch thick before finishing.

Bolson. A landscape term for an internally drained intermontane basin into which drainages from surrounding mountains converge inward toward a central depression.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Breaks. The steep and very steep broken land at the border of an upland summit that is dissected by ravines.

Breast height. An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Butte. An isolated small mountain or hill with steep or precipitous sides and a top variously flat, rounded, or pointed that may be a residual mass isolated by erosion or an exposed volcanic neck.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Caldera. A large, more or less circular depression, formed by explosion and/or collapse, which surrounds a volcanic vent or vents, and whose diameter is much greater than that of the included vent, or vents.

Caliche. A more or less cemented deposit of calcium carbonate in soils of warm-temperate, subhumid to arid areas. Caliche occurs as soft, thin layers in the soil or as hard, thick beds directly beneath the solum, or it is exposed at the surface by erosion.

California bearing ratio (CBR). The load-supporting capacity of a soil as compared to that of a standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Canyon. A long, deep, narrow, very steep sided valley with high, precipitous walls in an area of high local relief.

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or "chain," of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Channeled. Refers to a drainage area in which natural meandering or repeated branching and convergence of a streambed have created deeply incised cuts, either active or abandoned, in alluvial material.

Channery soil material. Soil material that is, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.

Clayey soil. Silty clay, sandy clay, or clay.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Claypan. A slowly permeable soil horizon that contains much more clay than the horizons above it. A claypan is commonly hard when dry and plastic or stiff when wet.

Clearcut. A method of forest harvesting that removes the entire stand of trees in one cutting. Reproduction is achieved artificially or by natural seeding from adjacent stands.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Closed depression. A low area completely surrounded by higher ground and having no natural outlet.

Coarse fragments. Mineral or rock particles larger than 2 millimeters in diameter.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded, partly rounded, or angular fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that is 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material is 35 to 60 percent of these rock fragments, and extremely cobbly soil material is more than 60 percent.

Codominant trees. Trees whose crowns form the general level of the forest canopy and that receive full light from above but comparatively little from the sides.

Colluvium. Unconsolidated, unsorted earth material moved and deposited by mass movement on sideslopes and at the base of slopes.

Commercial forest. Forest land capable of producing 20 cubic feet or more per acre per year at the culmination of mean annual increment.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Compressible (in tables). Excessive decrease in volume of soft soil under load.

Concretions. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane that typically takes the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

Conglomerate. A coarse grained, clastic rock composed of rounded to subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of

sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but, for many, it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Coprogenous earth (sedimentary peat). Fecal material deposited in water by aquatic organisms.

Corrosion. Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Cuesta. A hill or ridge that has a gentle slope on one side and a steep slope on the other; specifically, an asymmetric, homoclinal ridge capped by resistant rock layers of slight or moderate dip.

Culmination of the mean annual increment (CMAI).

The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deep soil. A soil that is 40 to 60 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Delta. A body of alluvium having a surface that is nearly flat and fan shaped, deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Depth to rock (in tables). Bedrock is too near the surface for the specified use.

Desert pavement. On a desert surface, a layer of gravel or larger fragments that was emplaced by upward movement of the underlying sediments or that remains after finer particles have been removed by running water or the wind.

Dip slope. A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Divided-slope farming. A form of field stripcropping in which crops are grown in a systematic arrangement

of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

Dominant trees. Trees whose crowns form the general level of the forest canopy and that receive full light from above and from the sides.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized: excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."

Drainage, surface. Runoff, or surface flow of water, from an area.

Drainageway. An area of ground at a lower elevation than the surrounding ground and in which water collects and is drained to a closed depression or lake or to a drainageway at a lower elevation. A drainageway may or may not have distinctly incised channels at its upper reaches or throughout its course.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Dune. A mound, ridge, or hill of loose, windblown granular material (generally sand), either bare or covered with vegetation.

Ecological Site. A distinctive kind of rangeland or grazed forestland that has a unique historic potential native plant community. Ecological sites are the products of all the environmental factors that affect their development. An ecological site is capable of supporting a native plant community that has a unique kind and/or proportion of species or total vegetative production. Ecological sites in grazed forestland include both overstory and understory vegetation.

Effervescence. The quality of a soil measured when drops of diluted (1:10) hydrochloric acid (HCL) are added to the soil. The ratings are as follows:

Very slightly effervescent few bubbles
Slightly effervescent bubbles readily
Strongly effervescent bubbles form low foam

Violently effervescent bubbles form thick foam quickly

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Eolian soil material. Earthy parent material accumulated through wind action; commonly refers to sandy material in dunes or to loess in blankets on the surface.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion pavement. A layer of gravel or stones that remains on the surface after fine particles are removed by sheet or rill erosion.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Synonym: scarp.

Even aged. Refers to a stand of trees in which only small differences in age occur between the individuals. A range of 20 years is allowed.

Excess alkali (in tables). Excess exchangeable sodium in the soil. The resulting poor physical properties restrict the growth of plants.

Excess fines (in tables). Excess silt and clay in the soil. The soil does not provide a source of gravel or sand for construction purposes.

Excess lime (in tables). Excess carbonates in the soil that restrict the growth of some plants.

Excess salts (in tables). Excess water-soluble salts in the soil that restrict the growth of most plants.

Excess sodium (in tables). Excess exchangeable sodium in the soil. The resulting poor physical properties restrict the growth of plants.

Excess sulfur (in tables). Excessive amount of sulfur in the soil. The sulfur causes extreme acidity if the soil is drained, and the growth of most plants is restricted.

Extrusive rock. Igneous rock derived from deep-seated molten matter (magma) emplaced on the earth's surface.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fan apron. A sheet-like mantle of relatively young alluvium covering part of an older fan piedmont surface. It somewhere buries a soil that can be traced to the edge of the fan apron.

Fan piedmont. The most extensive landform on piedmont slopes, formed by the coalescence of alluvial fans or accretions of fan aprons into one generally smooth slope.

Fan remnant. A general term for landforms that are remaining parts of older fan-landforms, that either have been dissected or partially buried.

Fan skirt. The zone of smooth, laterally-coalescing, small alluvial fans that issue from gullies cut into the fan piedmont or that are the coalescing extensions of inset fans of the fan piedmont, and that merge with the basin floor.

Fast intake (in tables). The rapid movement of water into the soil.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the oven-dry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a

soaking rain; also called *normal field capacity*, *normal moisture capacity*, or *capillary capacity*.

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of fire fighters and equipment. Designated roads also serve as firebreaks.

First bottom. The normal flood plain of a stream, subject to frequent or occasional flooding.

Flaggy soil material. Material that is, by volume, 15 to 35 percent flagstones. Very flaggy soil material is 35 to 60 percent flagstones, and extremely flaggy soil material is more than 60 percent flagstones.

Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain. A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

Fluvial. Of or pertaining to rivers; produced by river action, as a fluvial plain.

Foothill. A steeply sloping upland that has relief of as much as 1,000 feet (300 meters) and fringes a mountain range or high-plateau escarpment.

Foot slope. The inclined surface at the base of a hill.

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Fragile (in tables). A soil that is easily damaged by use or disturbance.

Frost action (in tables). Freezing and thawing of soil moisture. Frost action can damage roads, buildings and other structures, and plant roots.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gilgai. The microrelief of clayey soils that shrink and swell considerably with changes in moisture content. Usually manifested as a succession of microbasins and microknolls in nearly level areas or of microvalleys and microridges parallel with the slope.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as

protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that is 15 to 50 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of underlying material below the water table.

Gully. A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Gypsum. A mineral consisting of hydrous calcium sulfate.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Heavy metal. Inorganic substances that are solid at ordinary temperatures and are not soluble in water. They form oxides and hydroxides that are basic. Examples are copper, iron, cadmium, zinc, manganese, lead, and arsenic.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A natural elevation of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.

Holocene. The epoch of the Quaternary Period of geologic time, extending from the end of the

Pleistocene Epoch (about 10 to 12 thousand years ago) to the present.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. The major horizons of mineral soil are as follows:

O horizon.--An organic layer of fresh and decaying plant residue.

A horizon.--The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.--The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.--The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.--The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.--Soft, consolidated bedrock beneath the soil.

R layer.--Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock. Rock formed by solidification from a molten or partially molten state. Major varieties include plutonic and volcanic rock. Examples are andesite, basalt, and granite.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Inset fan. A special case of the flood plain of an ephemeral stream that is confined between fan remnants, basin-floor remnants, ballenas, or closely opposed fan toeslopes.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives groundwater discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Intermontane basin. A generic term for wide structural depressions between mountain ranges that are partly

filled with alluvium. They may be drained internally (bolsons) or externally (semi-bolsons).

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions. Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin.--Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.--Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes or borders.

Controlled flooding.--Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.--Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).--Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.--Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.--Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation.--Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding.--Water, released at high points, is allowed to flow onto an area without controlled distribution.

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Lagoon. The nearly level, filled depression behind the longshore bar on a barrier beach.

Lake plain. A surface marking the floor of an extinct lake, filled in by well sorted, stratified sediments.

Lake terrace. The narrow shelf produced along a lake shore and later exposed when the water recedes.

Lamella. A thin, generally horizontal layer of fine material illuviated within a very much thicker, coarser, eluviated layer.

Landform. Any recognizable form or feature on the earth's surface, having a characteristic shape, and produced by natural causes that provide an empirical description of similar portions of the earth's surface.

Landscape. A collection of related, natural landforms.

Landslide. The rapid downhill movement of a mass of soil and loose rock, generally when wet or saturated. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loamy soil. Coarse sandy loam, sandy loam, fine sandy loam, very fine sandy loam, loam, silt loam, silt, clay loam, sandy clay loam, or silty clay loam.

Loess. Fine grained material, dominantly of silt-sized particles, deposited by wind.

Longshore bar. A narrow, elongate, coarse-textured ridge, built by the wave action of a pluvial lake, that extends parallel to the shore and separated it from a lagoon; both the bar and lagoon are now relict features.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Low strength. The soil is not strong enough to support loads.

Marl. An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal amounts.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

Mean annual increment (MAI). The average annual increase in volume of a tree during the entire life of the tree.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Merchantable trees. Trees that are of sufficient size to be economically processed into wood products.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement. Nearly all such rocks are crystalline.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. An area that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately deep soil. A soil that is 20 to 40 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance--*few*, *common*, and *many*; size--*fine*, *medium*, and *coarse*; and contrast--*faint*, *distinct*, and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium*, from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse*, more than 15 millimeters (about 0.6 inch).

Mountain. A natural elevation of the land surface, rising more than 1,000 feet above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range.

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Mudstone. Sedimentary rock formed by induration of silt and clay in approximately equal amounts.

Munsell notation. A designation of color by degrees of three simple variables--hue, value, and chroma. For

example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Natric horizon. A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil. A soil having a pH value between 6.6 and 7.3. (See Reaction, soil.)

Nodules. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Observed rooting depth. Depth to which roots have been observed to penetrate.

Organic matter. Plant and animal residue in the soil in various stages of decomposition.

Overstory. The trees in a forest that form the upper crown cover.

Oxbow. The horseshoe-shaped channel of a former meander, remaining after the stream formed a cutoff across a narrow meander neck.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan*, *fragipan*, *claypan*, *plowpan*, and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Parna dune. An eolian dune built of sand size aggregates of clayey material that commonly occurs leeward of a playa.

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pediment. A gently sloping erosional surface developed at the foot of a receding hill or mountain slope.

Pedisediment. A thin layer of alluvial material that mantles an erosion surface and has been transported to its present position from higher lying areas of the erosion surface.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10

square meters), depending on the variability of the soil.

Percolation. The downward movement of water through the soil.

Percs slowly (in tables). The slow movement of water through the soil adversely affects the specified use.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

Extremely slow.....	0.00 to 0.01 inch
Very slow	0.01 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate.....	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Piedmont slope. The dominant slope at the foot of a mountain. Main components of the piedmont slope include pediments, alluvial fans, fan piedmonts, fan skirts and inset fans.

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plateau. An extensive upland mass with relatively flat summit area that is considerably elevated (more than 100 meters) above adjacent lowlands and separated from them on one or more sides by escarpments.

Playa. The generally dry and nearly level lake plain that occupies the lowest parts of closed depressional areas, such as those on intermontane basin floors. Temporary flooding occurs primarily in response to precipitation and runoff.

Pleistocene. The epoch of the Quaternary Period of geologic time preceding the Holocene (from approximately 10 thousand to 2 million years ago).

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Pluvial. Relating to former periods of abundant rains.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poor filter (in tables). Because of rapid or very rapid permeability, the soil may not adequately filter effluent from a waste disposal system.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Poor outlets (in tables). Refers to areas where surface or subsurface drainage outlets are difficult or expensive to install.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Quartzite, metamorphic. Rock consisting mainly of quartz that formed through recrystallization of quartz-rich sandstone or chert.

Quaternary. The period of geologic time, extending from about 2 million years ago to the present and comprising two epochs, the Pleistocene (Ice Age) and Holocene (Recent).

Quartzite, sedimentary. Very hard but unmetamorphosed sandstone consisting chiefly of quartz grains.

Range condition. The present composition of the plant community on a range site in relation to the potential natural plant community for that site. Range condition is expressed as excellent, good, fair, or poor on the basis of how much the present plant community has departed from the potential.

Rangeland. Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

Range site. An area of rangeland where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. A range site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other range sites in kind or proportion of species or total production.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid.....	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid.....	5.1 to 5.5
Moderately acid.....	5.6 to 6.0
Slightly acid.....	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	(mildly alkaline).7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline.....	8.5 to 9.0
Very strongly alkaline.....	9.1 and higher

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous

wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Regeneration. The new growth of a natural plant community, developing from seed.

Regolith. The unconsolidated mantle of weathered rock and soil material on the earth's surface; the loose earth material above the solid rock.

Relict stream terrace. One of a series of platforms in or adjacent to a stream valley that formed prior to the current stream system.

Relief. The elevations or inequalities of a land surface, considered collectively.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

Rill. A steep-sided channel resulting from accelerated erosion. A rill is generally a few inches deep and not wide enough to be an obstacle to farm machinery.

Riverwash. Unstable areas of sandy, silty, clayey, or gravelly sediments. These areas are flooded, washed, and reworked by rivers so frequently that they support little or no vegetation.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Rock outcrop. Exposures of bare bedrock other than lava flows and rock-lined pits.

Rooting depth (in tables). Shallow root zone. The soil is shallow over a layer that greatly restricts roots.

Root zone. The part of the soil that can be penetrated by plant roots.

Rubble land. Areas that have more than 90 percent of the surface covered by stones or boulders. Voids contain no soil material and virtually no vegetation other than lichens. The areas commonly are at the base of mountain slopes, but some are on mountain slopes as deposits of cobbles, stones, and boulders left by Pleistocene glaciation or by periglacial phenomena.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called groundwater runoff or seepage flow from ground water.

Saline soil. A soil containing soluble salts in an amount that impairs the growth of plants. A saline soil does not contain excess exchangeable sodium.

Salinity. The electrical conductivity of a saline soil. It is expressed, in millimhos per centimeter, as follows:

Nonsaline	0 to 2
Very slightly saline	2 to 4
Slightly saline	4 to 8
Moderately saline	8 to 16
Strongly saline	More than 16

Salty water (in tables). Water that is too salty for consumption by livestock.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sand sheet. A large, irregularly shaped, surficial mantle of eolian sand.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sandy soil. Sand or loamy sand.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saprolite. Unconsolidated residual material underlying the soil and grading to hard bedrock below.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Sawlogs. Logs of suitable size and quality for the production of lumber.

Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Scribner's log rule. A method of estimating the number of board feet that can be cut from a log of a given diameter and length.

Second bottom. The first terrace above the normal flood plain (or first bottom) of a river.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Seepage (in tables). The movement of water through the soil. Seepage adversely affects the specified use.

Semi-bolson. An intermontane basin that is drained externally by an intermittent stream.

- Sequum.** A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)
- Series, soil.** A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.
- Shale.** Sedimentary rock formed by the hardening of a clay deposit.
- Shallow soil.** A soil that is 10 to 20 inches deep over bedrock or to other material that restricts the penetration of plant roots.
- Sheet erosion.** The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.
- Shelterwood system.** A forest management system requiring the removal of a stand in a series of cuts so that regeneration occurs under a partial canopy. After regeneration, a final cut removes the shelterwood and allows the stand to develop in the open as an even-aged stand. The system is well suited to sites where shelter is needed for regeneration, and it can aid regeneration of the more intolerant tree species in a stand.
- Shoulder slope.** The uppermost inclined surface at the top of a hillside. It is the transition zone from the back slope to the summit of a hill or mountain. The surface is dominantly convex in profile and erosional in origin.
- Shrink-swell** (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.
- Shrub-coppice dune.** A small dune that forms around shrubs or small trees.
- Silica.** A combination of silicon and oxygen. The mineral form is called quartz.
- Silt.** As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.
- Siltstone.** Sedimentary rock made up of dominantly silt-sized particles.
- Similar soils.** Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.
- Sinkhole.** A depression in the landscape where limestone has been dissolved.
- Site class.** A grouping of site indexes into five to seven production capability levels. Each level can be represented by a site curve.
- Site curve (50-year).** A set of related curves on a graph that shows the average height of dominant or dominant and co-dominant trees for the range of ages on soils that differ in productivity. Each level is represented by a curve. The basis of the curves is the height of dominant or dominant and co-dominant trees that are 50 years old or are 50 years old at breast height.
- Site curve (100-year).** A set of related curves on a graph that shows the average height of dominant or dominant and co-dominant trees for a range of ages on soils that differ in productivity. Each level is represented by a curve. The basis of the curves is the height of dominant or dominant and co-dominant trees that are 100 years old or are 100 years old at breast height.
- Site index.** A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and co-dominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.
- Skid trails.** Pathways along which logs are dragged to a common site for loading onto a logging truck.
- Slash.** The branches, bark, treetops, reject logs, and broken or uprooted trees left on the ground after logging.
- Slickens.** Accumulations of fine-textured material, such as material separated in placer-mine and ore-mill operations. Slickens from ore mills commonly consist of freshly ground rock that has undergone chemical treatment during the milling process.
- Slickensides.** Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.
- Slick spot.** A small area of soil having a puddled, crusted, or smooth surface and an excess of exchangeable sodium. The soil generally is silty or clayey, is slippery when wet, and is low in productivity.
- Slippage** (in tables). Soil mass susceptible to movement downslope when loaded, excavated, or wet.
- Slope.** The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, the following slope classes are recognized:
- | | |
|-------------------------|----------------|
| Nearly level | 0 to 2 percent |
| Gently sloping | 2 to 4 percent |
| Moderately sloping..... | 4 to 8 percent |

Strongly sloping	8 to 15 percent
Moderately steep.....	15 to 30 percent
Steep	30 to 50 percent
Very steep.....	50 to 75 percent
Extremely steep	75 percent and higher

Slope (in tables). Slope is great enough that special practices are required to ensure satisfactory performance of the soil for a specific use.

Slow intake (in tables). The slow movement of water into the soil.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Small stones (in tables). Rock fragments less than 3 inches (7.6 centimeters) in diameter. Small stones adversely affect the specified use of the soil.

Sodic (alkali) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Sodicity. The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of Na^+ to $Ca^{++} + Mg^{++}$. The degrees of sodicity and their respective ratios are:

Very slight	5-12:1
Slight.....	13-30:1
Moderate.....	31-45:1
Strong	46-90:1
Very strong.....	more than 90:1

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand.....	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt.....	0.05 to 0.002
Clay.....	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are

active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Species. A single, distinct kind of plant or animal having certain distinguishing characteristics.

Stone line. A concentration of coarse fragments in a soil. Generally, it is indicative of an old weathered surface. In a cross section, the line may be one fragment or more thick. It generally overlies material that weathered in place and is overlain by recent sediment of variable thickness.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Strath terrace. A surface cut formed by the erosion of hard or semi-consolidated bedrock and thinly mantled with stream deposits.

Stream channel. The hollow bed where a natural stream of surface water flows or may flow; the deepest or central part of the bed, formed by the main current and covered more or less continuously by water.

Stream terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel. It originally formed near the level of the stream and is the dissected remnants of an abandoned flood plain, streambed, or valley floor that were produced during a former stage of erosion or deposition.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to soil blowing and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are: *platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grain* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summer fallow. The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

Summit. A general term for the top, or highest level, of an upland feature, such as a hill or mountain. It commonly refers to a higher area that has a gentle slope and is flanked by steeper slopes.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the "plow layer" or the "Ap horizon."

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Tailwater. The water directly downstream of a structure.

Talus. Fragments of rock and other soil material accumulated by gravity at the foot of cliffs or steep slopes.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field is generally built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geologic). A step-like surface, ordinarily flat or undulating, bordering a river, a lake, or the sea representing a former flood plain.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand*, *loamy sand*, *sandy loam*, *loam*, *silt loam*, *silt*, *sandy clay loam*, *clay loam*, *silty clay loam*, *sandy clay*, *silty clay*, and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."

Thin layer (in tables). Otherwise suitable soil material too thin for the specified use.

Till plain. An extensive area of nearly level to undulating soils underlain by glacial till.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toe slope. The outermost inclined surface at the base of a hill; part of a foot slope.

Too arid (in tables). The soil is dry most of the time, and vegetation is difficult to establish.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Toxicity (in tables). Excessive amount of toxic substances, such as sodium or sulfur, that severely hinder establishment of vegetation or severely restrict plant growth.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Trafficability. The degree to which a soil is capable of supporting vehicular traffic across a wide range in soil moisture conditions.

Tread. The relatively flat terrace surface that was cut or built by stream or wave action.

Tuff. A compacted deposit that is 50 percent or more volcanic ash and dust.

Understory. Any plants in a forest community that grow to a height of less than 5 feet.

Unstable fill (in tables). Risk of caving or sloughing on banks of fill material.

Upland (geology). Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Valley. An elongated depressional area primarily developed by stream action.

Valley fill. In glaciated regions, material deposited in stream valleys by glacial meltwater. In nonglaciated regions, alluvium deposited by heavily loaded streams.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Very deep soil. A soil that is more than 60 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Very shallow soil. A soil that is less than 10 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity

of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Waterspreading. Diverting runoff from natural channels by means of a system of dams, dikes, or ditches and spreading it over relatively flat surfaces.

Water supplying capacity. The total amount of water available in the soil for plant growth in a normal year from precipitation and from runoff from higher areas. Runoff and water lost to deep percolation are not included.

Weathering. All physical and chemical changes produced in rocks or other deposits at or near the earth's surface by atmospheric agents. These changes result in disintegration and decomposition of the material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an oven-dry basis, at which a plant (specifically, a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

USDA United States
Department of
Agriculture

Natural
Resources
Conservation
Service

In cooperation with
United States
Department of
Interior, Bureau of Land
Management and Bureau
of Indian Affairs; and
University of Nevada
Agricultural
Experiment Station

Soil Survey of Elko County, Nevada, Southeast Part Part II

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Soil Survey of

Elko County, Nevada, Southeast Part

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as rangeland and woodland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; and for wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Interpretative ratings help engineers, planners, and others to understand how soil properties influence important nonagricultural uses, such as building site development and construction materials. The ratings

indicate the most restrictive soil features affecting the suitability of the soils for these uses.

Soils are rated in their natural state. No unusual modification of the soil site or material is made other than that which is considered normal practice for the rated use. Even though soils may have limitations, it is important to remember that engineers and others can modify soil features or can design or adjust the plans for a structure to compensate for most of the limitations. Many of these practices, however, are costly. The final decision in selecting a site for a particular use generally involves weighing the costs of site preparation and maintenance.

Planners and others using soil survey information can evaluate the effect of specific uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, trees, and shrubs.

Crops and Pasture

General management needed for crops and pasture is suggested in this section. The system of land capability classification used by the Natural Resources Conservation Service is explained. The estimated yields of the main crops and pasture plants are listed for each soil in table 5 at the back of this publication.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading "Detailed Soil Map Units" in Part I of this Publication and in the "Soil Properties" portion of Part II. Specific information can be obtained from the local office of the Natural Resources Conservation Service or Cooperative Extension.

Yields per Acre

The average yields per acre that can be expected of the principal irrigated crops under a high level of management are shown in table 5, "Land Capability and Yields per Acre of Crops." In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of each map unit also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations are also considered.

For yields of irrigated crops, it is assumed that the irrigation system is adapted to the soils and to the crops grown, that good-quality irrigation water is uniformly applied as needed, and that tillage is kept to a minimum.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure,

and green manure crops; and harvesting that ensures the smallest possible loss.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in the table are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or Cooperative Extension can provide information about the management and productivity of the soils for those crops.

Pasture and Hayland Interpretations

Under good management, proper grazing is essential for the production of high quality forage, stand survival, and erosion control. Proper grazing helps plants to maintain sufficient and generally vigorous top growth during the growing season. Brush control is essential in many areas, and weed control generally is needed. Rotation grazing and renovation also are important management practices.

Yield estimates are often provided in animal unit months (AUM), the amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Information about forage yields other than those shown in table 5, "Land Capability and Yields per Acre of Crops," can be provided by the local office of the Natural Resources Conservation Service or Cooperative Extension.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive

landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for woodland, or for engineering purposes.

In the capability system, as described in "Land Capability Classification," (27) soils generally are grouped at three levels: capability class, subclass, and unit. These levels indicate the degree and kinds of limitations affecting mechanized farming systems that produce the more commonly grown field crops, such as corn, small grain, cotton, hay, and field-grown vegetables. Only class and subclass are used in this survey.

Capability classes, the broadest groups, are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use.

If properly managed, soils in classes I, II, III, and IV are suitable for the mechanized production of commonly grown field crops and for pasture and woodland. The degree of the soil limitations affecting the production of cultivated crops increases progressively from class I to class IV. The limitations can affect levels of production and the risk of permanent soil deterioration caused by erosion and other factors.

Soils in classes V, VI, and VII are generally not suited to the mechanized production of commonly grown field crops without special management, but they are suitable for plants that provide a permanent cover, such as grasses and trees. The severity of the soil limitations affecting crops increases progressively from class V to class VII. The local office of the Cooperative Extension or Natural Resources Conservation Service can provide guidance on the use of these soils as cropland.

Areas in class VIII are generally not suitable for crops, pasture, or woodland without a level of management that is impractical. These areas may have potential for other uses, such as recreational facilities and wildlife habitat.

Capability subclasses indicate the dominant limitations in the class. They are designated by adding a small letter, *e*, *w*, *s*, or *c*, to the class numeral, for example, IIe. The letter *e* shows that the main hazard is the risk of erosion unless a close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c* shows that the chief limitation is a climate that is very cold or very dry.

There are no subclasses in class I because the soils of this class have few limitations. Class V contains only the subclasses indicated by *w*, *s*, or *c* because the soils in class V are subject to little or no erosion. They have other

limitations that restrict their use mainly to pasture, rangeland, woodland, wildlife habitat, or recreation.

The irrigated capability classification of each farmland map unit is given in table 5, "Land Capability and Yields per Acre of Crops."

Erosion Factors

Soil erodibility factors *K_w* and *K_f* quantify the susceptibility of soil to detachment by water. A wind erodibility group (WEG) is a grouping of soils that have similar properties affecting their resistance to soil blowing. The Wind Erodibility Index (*I*) is based on the WEG and is used in the wind erosion equation. Soil erodibility factors *K_w* and *K_f* are used in the Revised Universal Soil Loss Equation. The procedure for predicting soil loss is useful in guiding the selection of soil and water conservation practices.

Soil Erodibility Factors *K_w* and *K_f*

Factor *K_w* shows the erodibility of the whole soil, and factor *K_f* shows the erodibility of only the fine-earth fraction, the material less than 2.0 millimeters in diameter. The soil erodibility factor indicates the susceptibility of a soil to sheet and rill erosion by water. The soil properties that influence erodibility are those that affect the infiltration rate, the movement of water through the soil, and the water storage capacity of the soil and those that allow the soil to resist dispersion, splashing, abrasion, and the transporting forces of rainfall and runoff. The most important soil properties are the content of silt plus very fine sand, the content of sand coarser than very fine sand, the content of organic matter, soil structure, and permeability.

Wind Erodibility Groups

Soils are assigned wind erodibility groups on the basis of the properties of the surface layer. The properties that are most important with respect to soil blowing are soil texture, content of organic matter, calcium carbonate, reaction, content of rock fragments, and aggregate stability. Wind erodibility is inversely related to the percentage of dry surface soil aggregates larger than 0.84 millimeter in diameter. From this percentage, the wind erodibility index factor (*I*) is determined.

Soil Loss Tolerance (T) Factor

The annual Soil Loss Tolerance (*T*) is an estimate of the maximum rate of erosion that can occur without affecting crop productivity. The *T* factor is expressed in tons of soil

loss per acre per year. Values of 1 to 5 are used. T values are assigned according to properties of limiting subsurface soil layers. The designation of a limiting layer implies that the material above the layer has more favorable properties for crop production. The criteria for assigning T are based on the severity of physical or chemical properties of subsurface layers, the climatically influenced properties of

soil moisture and temperature, the economic feasibility of utilizing management practices to overcome limiting layers or conditions, and the depth to the limiting layer.

Additional information about wind erodibility groups and I, Kw, Kf, and T factors can be obtained from local offices of the Natural Resources Conservation Service or Cooperative Extension.

Rangeland And Grazeable Woodland Resource Management

In this soil survey report, the term "rangeland" refers to a kind of land rather than a land use. Areas of rangeland provide many important resource values. They act as vast watersheds and provide habitat for wildlife, livestock forage, and opportunities for recreation. The resource values of rangeland are intricately related to each other and are often directly affected by rangeland management. Because of the interrelationships among rangeland resources, rangeland managers should consider all resource values when planning range improvements.

About 89 percent of the acreage in this survey area is rangeland. Livestock grazing is the principal agricultural use of the rangeland. Livestock operations are mostly cow-calf or cow-calf-sheep enterprises. Ranches range from a few hundred to several thousands acres in size. They rely heavily on permitted use of public lands. Most of the rangeland within the survey area is administered by the Bureau of Land Management. The Bureau of Indian Affairs has management responsibility for the rangeland within Indian reservations.

Soil-Site Correlation

During the course of this soil survey, ecological sites were correlated with the soils identified within the survey area. These correlations are based on the current understanding of soil-plant-climate relationships in the survey area. Soil properties that affect moisture supply and plant nutrients have the greatest influence on the productivity of range plants. Soil reaction, content of salts or lime, and topographic position are also important. The relationship of climate to vegetation and soils is considered in the classification of soils and in soil mapping criteria. In areas that have similar climate and topography, differences in the kind and amount of vegetation produced on rangeland are closely related to the kind of soil. Ecological sites can generally be determined from soil maps and map unit legends developed for the survey area.

Range Condition

Mining is the major industrial use of rangeland in the survey area and has played an important role in the history of the area. During the mining booms of the 1870's, herds of cattle, sheep, oxen, horses, and burros were brought to Elko County to be used as a source of power and feed for the developing mining communities. Heavy grazing pressure during these boom periods depleted native stands of forage throughout much of the survey area.

The early devastation of rangeland plant communities through uncontrolled livestock grazing ended long ago, but severely depleted areas still reflect the abuses of early settlement. In the most severely disturbed areas, palatable shrubs generally have been replaced by less desirable shrubs and many native perennial grasses and forbs have been replaced by alien or introduced annual grasses and forbs. Recovery of the plant community has been most evident where previous abuses were limited. The greater the level of deterioration, the longer the period of recovery. Although present-day rangeland production and plant diversity in the survey area are generally less than optimal, the overall condition of the rangeland is much improved from what was common in the early 1900's.

Range condition is determined by a comparison of the present plant community with the natural potential plant community on a particular rangeland ecological site. The more closely the existing community resembles the potential plant community, the higher the range condition. Range condition is an ecological rating only. It does not have a specific meaning that pertains to the present plant community for a given use. Ratings of range condition alone do not indicate whether the present plant community is improving or deteriorating in relation to its potential. The trend in range condition is a measure of the direction of change in the condition. It is an expression of the effects of current use. The present range condition is a reflection of the accumulated effects of past use. Once the potential plant communities have been identified and the present range condition has been determined, monitoring the trend in range condition over time can indicate whether management objectives are being met.

Rangeland Management

Range management requires knowledge of the kinds of soil and of the natural potential plant communities the soils in a given area can support. It also requires an evaluation of the present range condition. For most rangeland plant communities, good management can improve the present condition and productivity of the range and can help to prevent accelerated erosion. Proper management of rangeland depends on many factors. The season of grazing use, the kind of grazing animal, the intensity and distribution of grazing, and the range resource potential are important management considerations. Multiple-use management that meets present and future needs requires extensive knowledge of the capabilities and limitations of the range resources. An understanding of the soil properties and dynamics of native plant communities is fundamental in applying ecological principles to the evaluation and management of rangeland.

Generally, the objective of range management is to manage grazing so that the plants growing on a site are about the same in kind and amount as the natural potential plant community for that site. Such management generally results in the optimum production of vegetation, conservation of water, and control of erosion. To meet a special need or a specific use, however, it may be desirable to manage for a plant community other than the potential plant community for the site. Care must always be taken not to increase the susceptibility to erosion. Future uses and the relative ability of given sites to respond to management should be considered if the management objective is to establish a plant community other than the potential plant community.

Desirable forage plants of many plant communities within the survey area have been greatly depleted or even eliminated by excessive and untimely grazing. Generally, perennial grasses have decreased in abundance and woody plants have increased. The productivity of forage plants is below the production potential on many sites. Uneven livestock distribution has resulted in both overuse and underuse of the native forage.

An increase in the abundance and size of shrubs and an extensive invasion of cheatgrass (an introduced annual grass) have reduced the amount of soil moisture and nutrients available to perennial grasses and forbs. In areas where the range condition has not excessively deteriorated and an adequate population of desirable perennial grasses and forbs is available to respond to a release from plant competition, brush management can be effective in reversing the trend toward an increasing dominance of woody vegetation.

Abusive grazing of riparian vegetation by livestock can reduce water quality, eliminate streamside shrubs, cause soil compaction, accelerate erosion, and break down streambanks. Proper management of the rangeland in the survey area requires that special attention be given to riparian zones. Fortunately, riparian communities often respond to improved livestock management more rapidly than upland plant communities. Grazing treatments in riparian areas vary with the stability of the riparian plant community and the condition of the adjacent upland plant communities.

Rangeland Seeding

Rangeland seeding may be required following the removal of woody vegetation in areas where desirable understory plants are scarce or are not included in the present plant community. Revegetation also may be necessary for critical area treatment following a wildfire or other major disturbance. Maximum grazing capacity can be achieved in seeded stands where the objective of management is uniform grazing of the stands and prevention of the concentration of livestock. Additional water developments and fencing may be required to meet management objectives.

The success of range seeding depends on the amount of moisture available during the growing season. Even in areas where adapted species are planted and improved seeding and land treatment techniques are applied, the success of range seeding is strongly influenced by rainfall. The distribution and amount of precipitation in the survey area fluctuate widely from one year to the next. Years of below normal precipitation are relatively frequent, and the risk of seeding failure caused by the unpredictability of climate should be acknowledged in addition to critical soil properties that affect seeding success.

Each soil in the survey area is rated in table 6, "Suitability for Rangeland Seeding." The criteria used in the development of these ratings are available from the local Nevada office of the Natural Resources Conservation Service. Where critical area treatment is necessary, providing a plant cover that helps to prevent accelerated erosion may be advantageous on soils that are poorly suited to range seeding. The plants that are suited to the soils in the area to be treated should be selected for seeding.

More specific management concerns are addressed under the heading "Plant Communities in Elko County, Nevada, Southeast Part" later in this section. Additional information about rangeland management can be obtained from local offices of the Natural Resources Conservation Service or Cooperative Extension.

Wildlife Considerations

Reducing the extent of brush cover can benefit many game and nongame wildlife species where the habitat needs of those animals are properly identified and planned for in the manipulation of vegetation. For instance, extensive areas dominated by big sagebrush provide marginal habitat for pronghorn antelope. The habitat can be improved by measures that decrease the density and height of the sagebrush. The habitat for mule deer can be improved by removing big sagebrush and thus enhancing the diversity of understory grasses and forbs or increasing the production of green forage on transitional range that has an excessive cover of shrubs.

For other species, however, brush removal may be detrimental. Sage grouse is a habitat-specific bird, relying primarily on sagebrush to meet its life requirements. Plans for the manipulation of sagebrush stands on range inhabited by sage grouse should provide for the maintenance of suitable grouse habitat, especially nesting habitat near strutting grounds. The optimum nesting habitat for sage grouse is one in which the crown cover of sagebrush that is less than 30 inches high is 20 to 40 percent. Treatment of the sagebrush that reduces the cover from 40 to 20 percent may not seriously degrade the nesting habitat and commonly improves the quality of forage for sage grouse.

In an assessment of how the manipulation of vegetation affects wildlife, "edge" habitat is an important consideration. The structure and dominance of plants that remain after manipulation differ with the method of treatment. Fire removes all of the vegetation, including the skeletons or woody portions of shrubs, and thus eliminates the structure of woody vegetation from the treated area. Prescribed burning may enhance the habitat for a number of wildlife species. Mule deer and many nongame species select recently burned areas for feeding. Brush treatment with herbicides leaves the dead skeletons of shrubs and retains the shrub structure. Herbicides may kill broad-leaved forbs in the shrub understory, which are staples in the diet of many game and nongame species. Chaining and, to a lesser degree, brush beating change the vegetative structure from tree/shrub or shrub to grassland, and the residue they leave on the ground creates habitat for small mammals.

Many wildlife species in the survey area depend on riparian plant communities during much of the year. These plant communities support wildlife not common to desert ecosystems, such as short-eared owls, Pacific tree frogs, and long-tailed weasels. Riparian communities also provide islands of habitat in desert environments for migrating birds. Nuthatches, warblers, and other species

that nest in forest ecosystems migrate to desert riparian zones in spring and fall.

Livestock water developments can be beneficial to wildlife if the water is available when the wildlife species occupy the area. Forage for wildlife can be enhanced if adapted forbs are included in a rangeland seeding.

More specific wildlife management concerns are addressed under the heading "Plant Communities in Elko County, Nevada, Southeast Part." Additional information about wildlife management can be obtained from local offices of the Natural Resources Conservation Service, Cooperative Extension, or Nevada Division of Wildlife.

Plant Communities in Elko County, Nevada, Southeast Part

A rangeland ecological site is a distinctive kind of rangeland that differs from other kinds of rangeland in its ability to produce a characteristic natural plant community. An ecological site is the product of all environmental factors responsible for its development. It can support a native plant community typified by an association of species that differs from the potential plant community of other ecological sites in the kind or proportion of species or in total production. Disturbances, such as drought, fire, and grazing by native fauna, and the damage caused by insects and disease are recognized as natural factors in the development of native plant communities.

The appendix "Rangeland Plants and Woodland Understory" shows the rangeland plants and woodland understory for each soil and contrasting inclusion in the detailed soil map units, the rangeland or woodland ecological site, the common plant name and scientific plant symbol for the characteristic vegetation, the average percent composition for each species in the potential plant community, the rangeland or woodland ecological site, and the total annual production of vegetation in favorable, normal, and unfavorable years. The characteristic vegetation, which consists of the grasses, forbs, shrubs, and immature trees that make up most of the potential plant community for each soil, is listed by common name. For rangeland, the expected percentage of the total annual production is given for each species making up the characteristic vegetation. The amount that can be used as forage depends on the kinds of grazing animals, the grazing season, and the availability of forage. Many plants, trees, and shrubs are inaccessible to foraging animals. For woodland, the percentage of the total annual production is not given because of a wide variation of production under different tree canopies. The presence of a plant species in the understory vegetation is shown by an "X" in the composition section of the table.

Total potential production is the amount of vegetation that can be expected to grow annually on well managed rangeland or woodland that supports the potential natural community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's production of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation for favorable, normal, and unfavorable years. In a favorable year, above average amounts and optimum timing of precipitation during periods of warm temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture.

Riparian areas or meadows are interspersed throughout the survey area. Riparian vegetation grows on the flood plains along perennial streams. Stringer meadows are along spring-fed stream channels where moisture is available to plants throughout most of the growing season. Meadow vegetation also grows on the periphery of seeps and springs. Although they make up a small acreage in the survey area, the riparian zones are important because they provide free water, which improves the productivity of the riparian vegetation and lengthens the growing season of the vegetation. The zones are characterized by diverse plant species and a structural diversity of vegetation. The zones along stream channels are typically linear. The linear nature of the zones maximizes the edge effect between the zones and the adjacent uplands. An "edge," or ecotone, is a transition between plant communities or a joining of different vegetative structures within plant communities. It commonly is richer in wildlife than either of the adjoining communities.

Elko County, Nevada, Southeast Part is in the northeastern part of the Basin and Range Physiographic Province. The major plant associations in the survey area typify the general zonation of vegetation common in the Great Basin Region. Valley floors and the lower piedmont slopes are dominated by salt-desert shrub plant communities. Above the salt-desert shrub zone, sagebrush-grass plant communities are prevalent in areas where the mean annual precipitation is 8 inches or more.

Salt-desert shrub communities normally reflect either a climatically dry environment where the mean annual precipitation is less than 8 inches or physiologically dry soil conditions. High concentrations of salts that interfere with the uptake of water by plants can create physiologically dry soil conditions. Representative shrubs of the salt-desert shrub communities are shadscale, bud sagebrush, winterfat, and Douglas rabbitbrush. The common grasses include Indian ricegrass, bottlebrush squirreltail, Sandberg bluegrass, and desert needlegrass.

The salt-desert shrub plant communities in the survey area include stands dominated by a single shrub species and stands that support relatively heterogeneous mixtures of shrubs and grasses. The vegetation is generally sparse, normally covering less than 20 percent of the surface. Wind erosion and water erosion are hazards because of the naturally sparse plant cover in most areas. The interspaces between plants in salt-desert shrub communities commonly are stabilized by surface pavements of rock fragments, by a puddled and crusted soil surface, or by microphytic (algae) surface crusts. These protective features can be damaged by livestock or off-road vehicle traffic.

Salt-desert shrub plant communities are most valuable as winter range for livestock. They can produce high-quality winter forage and are usually subject to only light snowfall. Most of the desirable forage species in these communities are adversely affected by grazing in late winter (March and April), heavy use, or both. Where native rangeland communities are grazed in winter, an emergency supply of feed should be readily available to carry livestock through periods of unusually severe weather.

Properly regulated grazing management can enhance the long-term productivity of salt-desert shrub plant communities. This management includes deferred grazing during critical growth periods in late winter, rotational grazing, and control of the intensity and season of use. Fencing, herding, water hauling, and controlling livestock access to watering facilities can achieve a better distribution of grazing. Because of the harsh environment of the salt-desert shrub zone, manipulation of vegetation and revegetation projects generally are not advisable.

Salt-desert shrub communities provide habitat for a wide variety of nongame species, including whiptail lizards, antelope ground squirrels, loggerhead shrikes, and Pacific rattlesnakes. Plant communities that are dominated by shadscale or winterfat and associated forbs and grasses provide important winter range for pronghorn antelope. Fencing can deter the migration of pronghorn antelope because these animals commonly do not jump. As a result, the lower wire of the fences should be high enough for antelope to crawl under. Where feasible, the fence lines should be routed so that they cause the least disruption to antelope travel. Livestock water developments are beneficial to antelope and other wildlife if the water is available when the animals occupy the area. Few mule deer use salt-desert shrub communities, which generally are unimportant in deer management. Feral horses use these communities in winter.

Within the salt-desert shrub zone are low areas that commonly receive extra moisture as runoff from higher landscape positions and as shallow, low-velocity overflow during periods of runoff. Black greasewood, basin big sagebrush, and basin wildrye are important plants on

these sites. When in good condition, these plant communities can produce more than 2,000 pounds of basin wildrye per acre. When in poor condition, however, they typically produce less than 500 pounds per acre. The potential for increasing the production of basin wildrye is good on many sites in poor or fair condition in the survey area. Basin wildrye provides standing dried forage during its fall and winter dormancy and can provide calving areas in late winter. Mule deer, pygmy rabbits, and northern harriers inhabit basin wildrye communities throughout the year.

Other plant communities that reflect extra moisture conditions are adjacent to valley floor playas. These areas may have a high water table during periods of runoff. Black greasewood, shadscale, inland saltgrass, and basin wildrye are the characteristic plants on these sites.

Plant communities that are dominated by black greasewood provide thermal cover for many species of wildlife but have limited value for big game. Because of its spines and coarse structure, black greasewood provides protective cover to nesting birds and small mammals. Although this species is not a preferred forage plant for livestock, cattle and sheep eat the succulent spring growth. On late fall and winter ranges, the fruit of black greasewood and shadscale provides nutritious and palatable feed. The soluble oxalates in black greasewood may be harmful to livestock, especially sheep, if the new growth is excessively grazed in spring.

As snow melts in spring, runoff commonly drains into valley floor basins. It remains for short periods, providing nesting and feeding habitat for some waterfowl. Playas containing water in spring are important resting places for migrating waterfowl. Sand dunes formed through the deposition of windblown sediment are commonly on the leeward side of the playas in this survey area. Although of limited extent, partially stabilized sand dunes provide important habitat for both predator and prey vertebrate wildlife. Kangaroo rats, kit foxes, and bobcats inhabit the sand dunes.

Sagebrush-grass plant communities are at the lower elevations (5,800 to 6,100 feet) in the survey area. The average annual precipitation at these elevations is between 8 and 10 inches.

Wyoming big sagebrush, black sagebrush, and, to a lesser extent, basin big sagebrush are the dominant woody sagebrush plants at the lower elevations in the survey area. Cool-season perennial grasses are potentially the dominant herbaceous plants in the sagebrush-grass plant communities. Thurber needlegrass, Indian ricegrass, bottlebrush squirreltail, and Sandberg bluegrass are important cool-season bunch grasses. Grazing pressure has been severe on the sagebrush-grass plant communities at the lower elevations. These plant communities are the first to begin growth, or "greenup,"

during the warming periods of early spring and have traditionally been used for spring grazing by livestock. Close grazing spring after spring will eventually eliminate the perennial understory of grasses and forbs.

Grazing management practices can enhance the long-term productivity of sagebrush-grass communities. These practices include deferred grazing during critical growth periods in spring, rotational grazing, and control of the intensity and season of use. Fencing, herding, water hauling, and controlling livestock access to watering facilities can achieve a better distribution of grazing and facilitate grazing management.

Very few sources of perennial water are available in the sagebrush-grass zone at the lower elevations. Therefore, water developments and watering facilities are key elements in grazing management. Also, they can be of significant value to wildlife. Where the range condition has not deteriorated excessively and an adequate population of desirable perennial grasses and forbs is available to respond to a release from plant competition, brush management can greatly enhance the production of forage for livestock and wildlife.

The selection of plants available for rangeland seeding in the 8- to 10-inch precipitation zone is limited. Suitable species that are tolerant of early spring grazing, however, can be seeded. These species can play a key role in the management of grazing on the adjacent native sagebrush-grass and salt-desert shrub plant communities. Years of below normal precipitation are relatively frequent in this zone. Thus, the factors to be considered in managing rangeland seeding include the risk of seeding failure caused by climate.

Although the sagebrush-grass communities at the lower elevations may provide transitional spring range to pronghorn antelope moving from winter to summer ranges, plant communities that are dominated by big sagebrush are not heavily used by the antelope. Fencing can deter migration of the antelope because these animals commonly do not jump. As a result, the lower wire of the fences should be high enough for the antelope to crawl under. Where feasible, the fence lines should be routed so that they cause the least disruption to antelope travel. Livestock water developments are beneficial to wildlife, especially deer and antelope, if the water is available when the animals are in the area.

During severe winters in areas of the sagebrush-grass communities at the lower elevations, sage grouse may feed on sagebrush that has not been covered by snow. Heavy snow at the higher elevations forces chukar partridge to move into these areas in search of food. The sagebrush-grass communities at the lower elevations are used primarily by mule deer and feral horses as winter range or as transitional range in spring. Spring grazing by livestock in areas used by deer as winter range should be

managed so that the turn out of livestock is delayed until after spring "greenup" and the migration of most of the deer.

Sagebrush-grass communities are at intermediate elevations (6,100 to 7,500 feet) in the survey area. The average annual precipitation at these elevations is between 10 and 14 inches.

Wyoming big sagebrush dominates the shrub canopy of the mid-elevation plant communities on the warmer, drier exposures. Basin big sagebrush is most common on the deeper soils at the lower elevations in this precipitation zone. Mountain big sagebrush is prevalent on the north aspects at the lower elevations of the zone and grows on all aspects at the higher elevations. Low sagebrush and black sagebrush are the dominant types of dwarf sagebrush at the mid and upper elevations in the survey area. Bluebunch wheatgrass, Thurber needlegrass, Canby bluegrass, Sandberg bluegrass, and basin wildrye are the major perennial grasses associated with these mid-elevation sagebrush-grass communities. Antelope bitterbrush is an important shrub in many plant communities at these elevations.

The mid-elevation sagebrush-grass communities are suitable for grazing by livestock in summer and fall. Deferred grazing during critical growth periods in spring and early summer, rotational grazing, and control of the intensity and season of use can enhance the long-term productivity of these communities. Fencing, herding, and strategically locating livestock watering facilities help to achieve a better distribution of grazing and facilitate grazing management. Relatively few sources of perennial water are available in areas of the mid-elevation sagebrush-grass zone. As a result, water developments and watering facilities are key elements in grazing management and can be of significant value to wildlife.

Wyoming big sagebrush communities at mid elevations are used primarily as winter range by mule deer. They commonly provide habitat for Brewer's sparrow, black-tailed jackrabbits, and sagebrush lizards. They provide wintering areas for sage grouse. Low sagebrush communities provide important summer range for pronghorn antelope and brood-rearing habitat for sage grouse. Livestock water developments can be beneficial to wildlife, especially deer and antelope, if the water is available when the animals are in the area. Mountain big sagebrush and low sagebrush communities provide spring, summer, and fall range for mule deer and feral horses.

Seasonal grazing by livestock removes old grass residue and exposes the regrowth of succulent green stems and leaves that provide food for mule deer. The steep rock-faced cliffs common to these mid elevations have ledges, joints, cracks, and occasional caves and thus provide safe sites for birds and small mammals to nest and rear their young. The common nongame species are sage thrasher,

the Great Basin gopher snake, and desert mouse. Areas of exposed lava flow rock, natural breaks in the cliffs, and the associated talus commonly are used as travel lanes by wildlife, including mule deer.

Brush management practices can be very effective in increasing the production of native forage in the mid-elevation sagebrush-grass zone. They can be beneficial to wildlife as well as livestock. Opening up large, homogeneous stands of sagebrush commonly improves the habitat for wildlife, such as mule deer and pronghorn antelope. Rangeland seeding may be required following the removal of woody vegetation where desirable understory plants are scarce or are not included in the present plant community. A number of forbs and grasses are suitable for dryland seeding in the 10-to 14-inch precipitation zone. Including suitable forbs in the seeding mixture helps to provide additional forage for wildlife, such as pronghorn antelope, mule deer, and sage grouse.

Pinyon and juniper plant communities are at mid to upper elevations in the survey area. Local expansion of pinyon or juniper from woodland sites to the adjacent rangeland is common. The invasion of juniper and pinyon into sagebrush-grass communities has been attributed to overgrazing, a scarcity of naturally recurring fires, and climatic conditions. Young trees are readily killed by fire. The loss of fine fuel to carry fire and, to a lesser extent, fire control have limited the frequency and extent of natural fires in the sagebrush-grass zone. This reduction in the frequency of fires has allowed seedlings to become established in increasing numbers on sites that at one time supported virtually no trees.

Livestock commonly concentrate on the woodland sites, taking advantage of the shade and shelter provided by the tree overstory. These sites also provide habitat for nongame wildlife species, including the bushy-tailed woodrat, the blue-grey gnat-catcher, and the American kestrel; thermal cover for mule deer; and habitat for small mammals and birds.

Areas that have a heterogeneous mixture of vegetative types, including grassland, low shrub, tall shrub, and tree-shrub communities, generally provide an optimum diversity of wildlife habitat. These types of vegetative complexes are common in the sagebrush-grass zones at the intermediate and upper elevations. Moderate browsing by cattle on antelope bitterbrush in fall can enhance the vigor and growth of the bitterbrush, which is later available for grazing by mule deer and antelope.

Stringer meadows are along spring-fed stream channels in the sagebrush-grass zones at the intermediate and upper elevations. Meadow vegetation also grows on the periphery of seeps and springs. Wet meadows adjacent to sagebrush stands are important as brood-rearing areas for sage grouse. During the first weeks after leaving the nest, sage grouse chicks eat mainly insects (ants and beetles)

and the succulent forbs that are common in wet meadows. Grazing of the meadows by cattle can improve the quality of feed for sage grouse if a period of regrowth is provided for the key forb species. Grazing increases the succulence of the forbs by interrupting the maturation of the plant tissues. The succulent or young leaf tissue is higher in protein and lower in fiber than mature tissue. As they seek sources of succulent forbs, sage grouse select meadows that have been grazed by cattle. Sage grouse chicks find food and cover in properly grazed meadows, which appear patchy because of different stubble heights remaining after livestock have grazed the meadows.

Improper grazing of riparian vegetation by livestock can cause gully erosion. This erosion, in turn, can result in lower water tables, the drying out of meadows, and the loss of valuable wildlife and livestock forage. Grazing management strategies that are sensitive to the development and maintenance of healthy riparian areas are needed.

The uppermost elevations of the survey area (about 7,500 feet and higher) typically support high-elevation sagebrush-grass plant communities. The average annual precipitation ranges from 14 to more than 18 inches. Mountain big sagebrush, low, and black sagebrush dominate the shrub canopy of these plant communities. The shrub understory grasses include Idaho fescue, western needlegrass, mountain brome, Columbia needlegrass, Letterman needlegrass, basin wildrye, slender wheatgrass, and bluebunch wheatgrass. Mountain browse species, such as snowberry, serviceberry, and antelope bitterbrush, are common in the shrub overstory. Curlleaf mountainmahogany stands are at the highest elevations, on mountain summits, and the upper side slopes. Areas of aspen woodland are common in concave pockets and along riparian zones in the western part of the survey area.

Plant communities on the high-elevation sites are potentially very productive and normally respond rapidly to management. These sites remain cold and wet through spring and into early summer. They are used as summer range for livestock. Grazing should be delayed until the surface layer has dried sufficiently for compaction to be limited. Snow often blankets these sites by late fall, further restricting the period of livestock grazing. Steeply sloping areas are common throughout the high-elevation sagebrush-grass zone. Livestock tend to overuse the less

sloping areas unless grazing is managed for an even distribution of grazing. Fencing, properly locating watering facilities, and herding force livestock to use areas that otherwise might remain ungrazed. Salt and mineral blocks should be placed away from water.

Mule deer use the high-elevation plant communities for summer range. North-facing slopes that have a patchwork of dense stands consisting of mountain browse are important deer-fawning areas. These dense stands should be maintained because they provide cover for wildlife. Areas of aspen woodland provide important cover for wildlife and are a source of shade for livestock and wildlife.

Seeps and springs are common at the high elevations. Water for livestock generally is readily available. Additional water developments may be needed, however, to distribute the livestock evenly. Developed springs, pipelines, and storage tanks are dependable means of supplying water. Seeps and springs developed to provide livestock water can also be beneficial to wildlife. Excluding livestock by fencing the meadow around a seep or spring and piping the water to troughs or other storage facilities outside the enclosure help to protect the meadow vegetation grazed by wildlife. Enough water must be retained in the fenced seep or spring area to maintain the meadow vegetation. Small meadows can be developed and maintained by piping overflow water from livestock troughs into fenced areas.

Many naturally occurring meadows in the sagebrush-grass zones at the mid and higher elevations have been heavily invaded by big sagebrush. The sagebrush depletes moisture from the meadows. If the sagebrush is removed, the quantity of water and the duration of waterflow increase as grasses return to the meadows. Prescribed burning of dense sagebrush stands can be an economical means of brush management in the high-elevation sagebrush-grass zone. Brush management practices should be designed so that enough of the shrub canopy remains near meadows to provide cover for wildlife.

Rangeland seeding of the high-elevation plant communities is usually not necessary. In most areas, the remnant population of desirable forbs and grasses is sufficient to respond to grazing management and a release from shrub competition. Where rangeland seeding is needed, a wide variety of suitable species can be planted because of the relatively high annual precipitation in this zone.

Forest Land

Table 7, "Woodland Management and Productivity," can be used by forest managers in planning the use of soils for wood crops. Only those soils suitable for wood crops are listed.

Woodland Ordination System

Table 7, "Woodland Management and Productivity," lists the ordination (woodland suitability) symbol for each soil. The ordination system is a nationwide uniform system of labeling soils or groups of soils that are similar in use and management. The primary factors evaluated in the woodland ordination system are productivity of the forest overstory tree species and the principal soil properties resulting in hazards and limitations that affect forest management. There are three parts of the ordination system: class, subclass, and group. The class and subclass are referred to as the ordination symbol.

Ordination Class Symbol

The first element of the ordination symbol is a number that denotes potential productivity in terms of cubic meters of wood per hectare per year for the indicator tree species. The larger the number, the greater the potential productivity. Potential productivity is based on site index and the corresponding culmination of mean annual increment. For example, the number 1 indicates a potential production of 1 cubic meter of wood per hectare per year (14.3 cubic feet per acre per year) and 10 indicates a potential production of 10 cubic meters of wood per hectare per year (143 cubic feet per acre per year).

Indicator species is a species that is common in the area and is generally, but not necessarily, the most productive on the soil. It is the species that determines the ordination class. It is the first species listed for a particular map unit in table 7, "Woodland Management and Productivity." This table shows the productivity for all species where data have been collected.

Site index is determined by taking height measurements and determining the age of selected trees within stands of a given species. This index is the average height, in feet,

that the trees attain in a specified number of years. This index applies to fully stocked, even-aged, unmanaged stands. The site indexes shown in table 7, "Woodland Management and Productivity," are averages based on measurements made at sites that are representative of the soil series. When the site index and forest land productivity of different soils are compared, the values for the same tree species should be compared. The higher the site index number, the more productive the soil for that species. Site index values are used in conjunction with yield tables to determine average annual yields. Indirectly, they are used to determine the productivity class in the ordination class symbol.

Ordination Subclass Symbol

The second element of the ordination symbol, or subclass, is a capital letter that indicates certain soil or physiographic characteristics that contribute to important hazards or limitations to be considered in management. The subclasses are defined as follows:

Subclass X indicates that forest land use and management are limited by stones or rocks.

Subclass W indicates that forest land use and management are significantly limited by excess water, either seasonally or throughout the year. Restricted drainage, a high water table, or flooding can adversely affect either stand development or management.

Subclass T indicates that the root zone has toxic substances. Excessive alkalinity, acidity, sodium salts, or other toxic substances impede the development of desirable species.

Subclass D indicates that forest land use and management are limited by a restricted rooting depth. The rooting depth is restricted by hard bedrock, a hardpan, or other restrictive layers in the soil.

Subclass C indicates that forest land use and management are limited by the kind or amount of clay in the upper part of the soil.

Subclass S indicates that the soil is sandy, has a low available water capacity, and normally has a low content of available plant nutrients. The use of equipment is limited during dry periods.

Subclass F indicates that forest land use and management are limited by a high content of rock fragments that are larger than 2 millimeters and smaller than 10 inches. This subclass includes flaggy soils.

Subclass R indicates that forest land use and management are limited by excessive slope.

Subclass A indicates that no significant limitations affect forest land use and management.

Forest Land Management and Productivity

Information about the productivity and management of the forested map units in the survey area is given in table 7, "Woodland Management and Productivity."

Management Concerns

In table 7, "Woodland Management and Productivity," the soils are rated for the erosion hazard, the equipment limitation, seedling mortality, the windthrow hazard, and plant competition.

The *erosion hazard* is *slight* if the expected soil loss is small; *moderate* if some measures are needed to control erosion during logging and road construction; and *severe* if intensive management or special equipment and methods are needed to prevent excessive soil loss.

The *equipment limitation* is *slight* if the use of equipment is not limited to a particular kind of equipment or time of year; *moderate* if there is a short seasonal limitation or a need for some modification in the management of

equipment; and *severe* if there is a seasonal limitation, a need for special equipment or management, or a hazard in the use of equipment.

Seedling mortality ratings are for seedlings that are from a good planting stock and that are properly planted during a period of average rainfall. A rating of *slight* indicates that the expected mortality of the planted seedlings is less than 25 percent; *moderate*, 25 to 50 percent; and *severe*, more than 50 percent.

Windthrow hazard is *slight* if trees in wooded areas are not expected to be blown down by commonly occurring winds; *moderate* if some trees are blown down during periods of excessive soil wetness and strong winds; and *severe* if many trees are blown down during periods of excessive soil wetness and moderate or strong winds.

Plant competition is *slight* if there is little or no competition from other plants; *moderate* if plant competition is expected to hinder the development of a fully stocked stand of desirable trees; and *severe* if plant competition is expected to prevent the establishment of a desirable stand unless the site is intensively prepared, weeded, or otherwise managed for the control of undesirable plants.

Potential Productivity

The potential productivity of merchantable or *common trees* is expressed as a site index, which is described under the heading "Ordination Class Symbol." Commonly grown trees are those that forest land managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development and construction materials. The ratings are based on observed performance of the soils and on the estimated data and test data in the "Soil Properties" section.

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil within a depth of 5 or 6 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about grain-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 or 6 feet of the surface, soil wetness, depth to a seasonal high water table, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kind of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground

cables; evaluate alternative sites for septic tank absorption fields; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, earthfill, and topsoil; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the "Glossary."

Building Site Development

Table 8, "Building Site Development," shows the degree and kind of soil limitations that affect shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping. The limitations are considered *slight* if soil properties and site features generally are favorable for the indicated use and limitations are minor and easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required. Special feasibility studies may be required where the soil limitations are severe.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for basements, graves, utility lines, open ditches, and other purposes. The ratings are based on soil properties, site features, and observed performance of the soils. The ease of digging, filling, and compacting is affected by the depth to bedrock, a cemented pan, or a very firm dense layer; stone content; soil texture; and slope. The time of the year that excavations can be made is affected by the depth to a seasonal high water table and the susceptibility of the soil to flooding. The resistance of the excavation walls or banks to sloughing or caving is affected by soil texture and depth to the water table.

Dwellings and small commercial buildings are structures built on shallow foundations on undisturbed soil. The load limit is the same as that for single-family dwellings no higher than three stories. Ratings are made for small commercial buildings without basements, for dwellings with basements, and for dwellings without basements. The ratings are based on soil properties, site features, and observed performance of the soils. A high water table, flooding, shrinking and swelling, and organic layers can cause the movement of footings. A high water table, depth to bedrock or to a cemented pan, large stones, and flooding affect the ease of excavation and construction. Landscaping and grading that require cuts and fills of more than 5 or 6 feet are not considered.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or stabilized soil material; and a flexible or rigid surface. Cuts and fills generally are limited to less than 6 feet. The ratings are based on soil properties, site features, and observed performance of the soils. Depth to bedrock or to a cemented pan, a high water table, flooding, large stones, and slope affect the ease of excavating and grading. Soil strength (as inferred from the engineering classification of the soil), shrink-swell potential, potential for frost action, and depth to a high water table affect the traffic-supporting capacity.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. The ratings are based on soil properties, site features, and observed performance of the soils. Soil reaction, a high water table, depth to bedrock or to a cemented pan, the available water capacity in the upper 40 inches, and the content of salts, sodium, and sulfidic materials affect plant growth. Flooding, wetness, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer affect trafficability after vegetation is established.

Waste Management

Soil properties are important when organic waste is applied as fertilizer and wastewater is applied in irrigated areas. They also are important when the soil is used as a medium for the treatment and disposal of the organic waste and wastewater. Unfavorable soil properties can result in environmental damage.

The use of organic waste and wastewater as production resources results in energy and resource conservation and minimizes the problems associated with waste disposal. If disposal is the goal, applying a maximum amount of the organic waste or the wastewater to a minimal area holds

costs to a minimum and environmental damage is the main hazard. If reuse is the goal, a minimum amount should be applied to a maximum area and environmental damage is unlikely.

Interpretations developed for waste management may include ratings for manure- and food-processing waste, municipal sewage sludge, use of wastewater for irrigation, and treatment of wastewater by slow rate, overland flow, and rapid infiltration processes.

Specific information regarding waste management is available at the local office of the Natural Resources Conservation Service or Cooperative Extension.

Construction Materials

Table 9, "Construction Materials," gives information about the soils as a source of roadfill, sand, gravel, and topsoil. The soils are rated *good*, *fair*, or *poor* as a source of roadfill and topsoil. They are rated as a *probable* or *improbable* source of sand and gravel.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In table 9, "Construction Materials," the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the soil material below the surface layer to a depth of 5 or 6 feet. It is assumed that soil layers will be mixed during excavating and spreading. Many soils have layers of contrasting suitability within their profile. The table showing engineering index properties provides detailed information about each soil layer. This information can help to determine the suitability of each layer for use as roadfill. The performance of soil after it is stabilized with lime or cement is not considered in the ratings.

The ratings are based on soil properties, site features, and observed performance of the soils. The thickness of suitable material is a major consideration. The ease of excavation is affected by large stones, a high water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the engineering classification of the soil) and shrink-swell potential.

Soils rated *good* contain significant amounts of sand or gravel, or both. They have at least 5 feet of suitable material, a low shrink-swell potential, few cobbles and stones, and slopes of 15 percent or less. Depth to the water table is more than 3 feet. Soils rated *fair* are more than 35 percent silt- and clay-sized particles and have a plasticity index of less than 10. They have a moderate shrink-swell potential, slopes of 15 to 25 percent, or many stones. Depth to the water table is 1 to 3 feet. Soils rated

poor have one or more of the following characteristics: a plasticity index of more than 10, a high shrink-swell potential, many stones, slopes of more than 25 percent, or a water table at a depth of less than 1 foot. They may have layers of suitable material, but the material is less than 3 feet thick.

Sand and gravel are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 9, "Construction Materials," only the probability of finding material in suitable quantity in or below the soil is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material.

The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the engineering classification of the soil), the thickness of suitable material, and the content of rock fragments. Kinds of rock, acidity, and stratification are given in the soil series descriptions. Gradation of grain sizes is given in the table on engineering index properties.

A soil rated as a probable source has a layer of clean sand or gravel or a layer of sand or gravel that is as much as 12 percent silty fines. This material must be at least 3 feet thick and less than 50 percent, by weight, large stones. All other soils are rated as an improbable source. Fragments of soft bedrock, such as shale and siltstone, are not considered to be sand and gravel.

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a

soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area.

Plant growth is affected by toxic material and by such properties as soil reaction, available water capacity, and fertility. The ease of excavating, loading, and spreading is affected by rock fragments, slope, a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, a water table, rock fragments, bedrock, and toxic material.

Soils rated *good* have friable, loamy material to a depth of at least 40 inches. They are free of stones and cobbles, have little or no gravel, and have slopes of less than 8 percent. They are low in content of soluble salts, are naturally fertile or respond well to fertilizer, and are not so wet that excavation is difficult.

Soils rated *fair* are sandy soils, loamy soils that have a relatively high content of clay, soils that have only 20 to 40 inches of suitable material, soils that have an appreciable amount of gravel, stones, or soluble salts, or soils that have slopes of 8 to 15 percent. The soils are not so wet that excavation is difficult.

Soils rated *poor* are very sandy or clayey; have less than 20 inches of suitable material; have a large amount of gravel, stones, or soluble salts; have slopes of more than 15 percent; or have a seasonal high water table at or near the surface.

The surface layer of most soils generally is preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey. The data and the estimates of soil and water features listed in tables are explained on the following pages.

Soil properties are determined by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine grain-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties shown in the tables include the range of grain-size distribution and Atterberg limits, the engineering classification, and the physical and chemical properties of the major layers of each soil. Pertinent soil and water features also are given.

Engineering Index Properties

Table 10, "Engineering Index Properties" gives estimates of the engineering classification and of the range of index properties for the major layers of each soil in the survey area. Most soils have layers of contrasting properties within the upper 5 or 6 feet.

Depth to the upper and lower boundaries of each layer is indicated. The range in depth and information on other properties of each layer are given in the series descriptions in Part I of this survey.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52

percent sand. If the content of particles coarser than sand is as much as 15 percent, an appropriate modifier is added, for example, "gravelly." Textural terms are defined in the "Glossary."

Classification of the soils is determined according to the system adopted by the American Association of State Highway and Transportation Officials (1) and the Unified soil classification system (2).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to grain-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, SP-SM.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an oven-dry weight. The sieves,

numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

The estimates of grain-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is omitted in the table.

Physical and Chemical Properties

Table 11, "Physical Properties of the Soils," and table 12, "Chemical Properties of the Soils," show estimates of some characteristics and features that affect soil behavior. These estimates are given for the major layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated. The range in depth and information on other properties of each layer are given in the series descriptions in Part I of this survey.

Clay as a soil separate, or component, consists of mineral soil particles that are less than 0.002 millimeter in diameter. The estimated clay content of each major soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The amount and kind of clay greatly affect the fertility and physical condition of the soil. They determine the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earth-moving operations.

Moist bulk density is the weight of soil (oven-dry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at 1/3-bar moisture tension. Weight is determined after drying the soil at 105 degrees C. In table 11, "Physical Properties of the Soils," the estimated moist bulk density of each major soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. A

bulk density of more than 1.6 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability refers to the ability of a soil to transmit water or air. The estimates indicate the rate of downward movement of water when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each major soil layer. The capacity varies depending on soil properties that affect the retention of water and the depth of the root zone. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Shrink-swell potential is the potential for volume change in a soil with a loss or gain in moisture. Volume change occurs mainly because of the interaction of clay minerals with water and varies with the amount and type of clay minerals in the soil. The size of the load on the soil and the magnitude of the change in soil moisture content influence the amount of swelling of soils in place. Laboratory measurements of swelling of undisturbed clods were made for many soils. For others, swelling was estimated on the basis of the kind and amount of clay minerals in the soil and on measurements of similar soils.

If the shrink-swell potential is rated moderate to very high, shrinking and swelling can cause damage to buildings, roads, and other structures. Special design is often needed.

Shrink-swell potential classes are based on the change in length of an unconfined clod as moisture content is increased from air-dry to field capacity. The classes are *low*, a change of less than 3 percent; *moderate*, 3 to 6 percent; and *high*, more than 6 percent. *Very high*, more than 9 percent, is sometimes used.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 11, "Physical Properties of Soils," the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained or increased by returning crop residue to the soil. Organic matter affects the available water capacity, infiltration rate,

and tilth. It is a source of nitrogen and other nutrients for crops.

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) to predict the average rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, very fine sand, sand, and organic matter (as much as 4 percent) and on soil structure and permeability. The estimates are modified by the presence of rock fragments. Values of K range from 0.02 to 0.69. The higher the value, the more susceptible the soil is to sheet and rill erosion.

Erosion factor K_f indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their resistance to soil blowing in cultivated areas. The groups indicate the susceptibility of soil to soil blowing. Soils are grouped according to the following distinctions:

1. Coarse sands, sands, fine sands, and very fine sands. These soils generally are not suitable for crops. They are extremely erodible and vegetation is difficult to establish.
2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, and sapric soil material. These soils are very highly erodible. Crops can be grown if intensive measures to control soil blowing are used.
3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams. These soils are highly erodible. Crops can be grown if intensive measures to control soil blowing are used.
- 4L. Calcareous loams, silt loams, clay loams, and silty clay loams that have more than 5 percent finely divided calcium carbonate. These soils are highly erodible. Crops can be grown if intensive measures to control soil blowing are used.
4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay. These soils are moderately erodible. Crops can be grown if measures to control soil blowing are used.
5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material. These soils have less than 5 percent finely divided calcium carbonate. These soils are moderately erodible. Crops can be grown if measures to control soil blowing are used.
6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay. These soils have less than 5

percent finely divided calcium carbonate. These soils are moderately erodible. Crops can be grown if ordinary measures to control soil blowing are used.

7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material. These soils have less than 5 percent finely divided calcium carbonate. These soils are very slightly erodible. Crops can be grown if ordinary measures to control soil blowing are used.

8. Soils that are not subject to soil blowing because of rock fragments on the surface or because of surface wetness.

Wind erodibility index is a numerical value indicating the susceptibility of soil to soil blowing, or the tons per acre per year that can be expected to be lost to soil blowing. There is a close correlation between soil blowing and the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence soil blowing.

Cation-exchange capacity is the total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. Soils having a high cation-exchange capacity can retain cations. The ability to retain cations helps to prevent the pollution of ground water.

Soil reaction is a measure of acidity or alkalinity and is expressed as a range in pH values. The range in pH of each major horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the soil. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Gypsum is given as the percent, by weight, of hydrated calcium sulfates in the soil. Gypsum is partially soluble in water and can be dissolved and removed by water. Soils that have a high content of gypsum (more than 10 percent) may collapse if the gypsum is removed by percolating water.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils.

The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of the soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Sodium adsorption ratio is the measure of sodium relative to calcium and magnesium in the water extract from saturated soil paste. Soils having a sodium adsorption ratio of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced permeability and aeration, and a general degradation of soil structure.

Water Features

Table 13, "Water Features," gives estimates of several important water features used in land use planning that involves engineering considerations. These features are described in the following paragraphs.

Hydrologic soil groups are groups of soils that, when saturated, have the same runoff potential under similar storm and ground cover conditions. The soil properties that affect the runoff potential are those that influence the minimum rate of infiltration in a bare soil after prolonged wetting and when the soil is not frozen. These properties include the depth to a seasonal high water table, the intake rate, permeability after prolonged wetting, and the depth to a very slowly permeable layer. The influences of ground cover and slope are treated independently and are not taken into account in hydrologic soil groups.

In the definitions of the hydrologic soil groups, the infiltration rate is the rate at which water enters the soil at the surface and is controlled by surface conditions. The transmission rate is the rate at which water moves through the soil and is controlled by properties of the soil layers.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist chiefly of very deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well or well drained soils that have a moderately fine to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils that have a moderately fine or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clayey soils that have a high shrink-swell potential, soils that have a permanent high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Flooding, the temporary covering of the soil surface by flowing water, is caused by overflow from streams or by runoff from adjacent slopes. Shallow water standing or flowing for short periods after rainfall or snowmelt is not considered flooding. Standing water in marshes and swamps or in closed depressions is considered to be ponding.

Table 13, "Water Features," gives the frequency and duration of flooding and the time of year when flooding is most likely to occur. Frequency, duration, and probable dates of occurrence are estimated. Frequency generally is expressed as none, rare, occasional, or frequent. *None* means flooding is not probable; *rare* that it is unlikely but is possible under unusual weather conditions (the chance of flooding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); and *frequent* that it occurs often under normal weather conditions (the chance of flooding is 50 percent in any year). The term *common* includes both frequent and occasional flooding.

Duration is expressed as *very brief* (less than 2 days), *brief* (2 to 7 days), *long* (7 to 30 days), and *very long* (more than 30 days). The time of year that flooding is most likely to occur is expressed in months. About two-thirds to three-fourths of all flooding occurs during the stated period.

The information on flooding is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and level of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate

flood-prone areas at specific flood frequency levels.

High water table (seasonal) is a zone of saturation at the highest average depth during the wettest season. It is at least 6 inches thick, persists in the soil for more than a few weeks, and is within 6 feet of the surface. Indicated in table 13, "Water Features," are the depth to the seasonal high water table, the kind of water table, and the months of the year when the water table usually is highest.

An *apparent* water table is indicated by the level at which water stands in a freshly dug, unlined borehole after adequate time for adjustments in the surrounding soil.

A *perched* water table is one that is above an unsaturated zone in the soil. The basis for determining that a water table is perched may be general knowledge of the area. The water table is proven to be perched if the water level in a borehole is observed to fall when the borehole is extended.

Two numbers in the column showing depth to the water table indicate the normal range in depth to a saturated zone. Depth is given to the nearest half foot. The first numeral in the range indicates the highest water level. A plus sign preceding the range in depth indicates that the water table is above the surface of the soil. "More than 6.0" indicates that the water table is below a depth of 6 feet or that it is within a depth of 6 feet for less than a month.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation.

Soil Features

Table 14, "Soil Features," gives estimates of several important soil features used in land use planning that involves engineering considerations. These features are described in the following paragraphs.

Depth to bedrock is given if bedrock is within a depth of 60 inches. The depth is based on many soil borings and on observations during soil mapping. The rock is specified as either soft or hard. If the rock is soft or fractured, excavations can be made with trenching machines, backhoes, or small rippers. If the rock is hard or massive, blasting or special equipment generally is needed for excavation.

A *cemented pan* is a nearly continuous layer of indurated or strongly cemented material that is hard and brittle. The particles are held together by cementing substances, such as calcium carbonate and oxides of silicon, iron, or aluminum. Pans are identified when they are within a depth of 60 inches. They are classified as thin or thick. A

thin pan can be excavated by trenching machines, backhoes, small rippers, and other equipment commonly used to dig excavations for pipelines, sewer lines, and graves. A *thick* pan is so thick or massive that blasting or special equipment is needed when excavations are made.

Subsidence is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. Table 14, "Soil Features," shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

Potential frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage mainly to pavements and other rigid structures.

A *low* potential for frost action indicates that the soil is rarely susceptible to the formation of ice lenses; a *moderate* potential indicates that the soil is susceptible to formation of ice lenses, resulting in frost heave and the subsequent loss of soil strength; and a *high* potential indicates that the soil is highly susceptible to formation of ice lenses, resulting in frost heave and the subsequent loss of soil strength.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that dissolves or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil.

Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than steel in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low*, *moderate*, or *high*, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion is also expressed as *low*, *moderate*, or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

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Glossary

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alkali (sodic) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Alluvial cone. The material washed down the sides of mountains and hills by ephemeral streams and deposited at the mouth of gorges in the form of a moderately steep, conical mass descending equally in all directions from the point of issue.

Alluvial fan. The fanlike deposit of a stream where it issues from a narrow valley upon a plain, or of a tributary stream near or at its junction with its main stream.

Alluvial flat. A nearly level, graded, alluvial surface in bolsons and semi-bolsons. Commonly, an alluvial flat does not manifest terraces or floodplain levels.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Alpha,alpha-dipyridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Area reclaim (in tables). An area difficult to reclaim after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Argillite. Weakly metamorphosed mudstone or shale.

Arroyo. The flat-floored channel of an ephemeral stream, commonly with very steep to vertical banks cut in alluvium.

Aspect. The direction in which a slope faces.

Association, soil. A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity).

The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3.5
Low	3.5 to 5
Moderate.....	5 to 7.5
High	more than 7.5

Avalanche chute. The track or path formed by an avalanche.

Back slope. The geomorphic component that forms the steepest inclined surface and principal element of many hillsides. Back slopes in profile are commonly steep, are linear, and may or may not include cliff segments.

Backswamp. A floodplain landform of extensive, marshy, or swampy, depressed areas of flood plains between natural levees and valley sides or terraces.

Badland. Steep or very steep, commonly nonstony, barren land dissected by many intermittent drainage channels. Badland is most common in semiarid and arid regions where streams are entrenched in soft geologic material. Local relief generally ranges from 25 to 500 feet. Runoff potential is very high, and geologic erosion is active.

Ballena. A fan remnant having a distinctively-rounded surface of fan alluvium. The ballena's broadly rounded shoulders meet from either side to form a narrow summit and merge smoothly with concave, short pediments which form smoothly-rounded drainageways between adjacent ballenas. A partial ballena is a fan remnant large enough to retain some relict fan surface on a remnant summit.

Barrier beach. A wide gently sloping portion of a bolson floor comprising numerous, parallel, relict longshore-bars and lagoons built by a receding pluvial lake.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, K), expressed as a percentage of the total cation-exchange capacity.

Basin floor. A general term for the nearly level, lower-most part of intermontane basins (i.e., bolson, semi-bolsos). The basin floor includes all of the alluvial, eolian, and erosional landforms below the piedmont slope.

Beach terrace. The relict shorelines from pluvial lakes, generally restricted to valley sides.

Bedding planes. Fine strata, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediment.

Bedding system. A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bench terrace. A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Blowout. A shallow depression from which all or most of the soil material has been removed by wind. A blowout has a flat or irregular floor formed by a resistant layer or by an accumulation of pebbles or

cobbles. In some blowouts, the water table is exposed.

Board foot. A unit of measure of the wood in lumber, logs, or trees. The amount of wood in a board one foot wide, one foot long, and one inch thick before finishing.

Bolson. A landscape term for an internally drained intermontane basin into which drainages from surrounding mountains converge inward toward a central depression.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Breaks. The steep and very steep broken land at the border of an upland summit that is dissected by ravines.

Breast height. An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Butte. An isolated small mountain or hill with steep or precipitous sides and a top variously flat, rounded, or pointed that may be a residual mass isolated by erosion or an exposed volcanic neck.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Caldera. A large, more or less circular depression, formed by explosion and/or collapse, which surrounds a volcanic vent or vents, and whose diameter is much greater than that of the included vent, or vents.

Caliche. A more or less cemented deposit of calcium carbonate in soils of warm-temperate, subhumid to arid areas. Caliche occurs as soft, thin layers in the soil or as hard, thick beds directly beneath the solum, or it is exposed at the surface by erosion.

California bearing ratio (CBR). The load-supporting capacity of a soil as compared to that of a standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

- Canyon.** A long, deep, narrow, very steep sided valley with high, precipitous walls in an area of high local relief.
- Capillary water.** Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.
- Catena.** A sequence, or "chain," of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.
- Cation.** An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.
- Cation-exchange capacity.** The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.
- Channeled.** Refers to a drainage area in which natural meandering or repeated branching and convergence of a streambed have created deeply incised cuts, either active or abandoned, in alluvial material.
- Channery soil material.** Soil material that is, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a chanter.
- Chemical treatment.** Control of unwanted vegetation through the use of chemicals.
- Chiseling.** Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.
- Clay.** As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.
- Clay depletions.** Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.
- Clayey soil.** Silty clay, sandy clay, or clay.
- Clay film.** A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.
- Claypan.** A slowly permeable soil horizon that contains much more clay than the horizons above it. A claypan is commonly hard when dry and plastic or stiff when wet.
- Clearcut.** A method of forest harvesting that removes the entire stand of trees in one cutting. Reproduction is achieved artificially or by natural seeding from adjacent stands.
- Climax plant community.** The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.
- Closed depression.** A low area completely surrounded by higher ground and having no natural outlet.
- Coarse fragments.** Mineral or rock particles larger than 2 millimeters in diameter.
- Coarse textured soil.** Sand or loamy sand.
- Cobble (or cobblestone).** A rounded, partly rounded, or angular fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.
- Cobbly soil material.** Material that is 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material is 35 to 60 percent of these rock fragments, and extremely cobbly soil material is more than 60 percent.
- Codominant trees.** Trees whose crowns form the general level of the forest canopy and that receive full light from above but comparatively little from the sides.
- Colluvium.** Unconsolidated, unsorted earth material moved and deposited by mass movement on sideslopes and at the base of slopes.
- Commercial forest.** Forest land capable of producing 20 cubic feet or more per acre per year at the culmination of mean annual increment.
- Complex slope.** Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.
- Complex, soil.** A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.
- Compressible** (in tables). Excessive decrease in volume of soft soil under load.
- Concretions.** Cemented bodies with crude internal symmetry organized around a point, a line, or a plane that typically takes the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.
- Conglomerate.** A coarse grained, clastic rock composed of rounded to subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of

sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but, for many, it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Coprogenous earth (sedimentary peat). Fecal material deposited in water by aquatic organisms.

Corrosion. Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Cuesta. A hill or ridge that has a gentle slope on one side and a steep slope on the other; specifically, an asymmetric, homoclinal ridge capped by resistant rock layers of slight or moderate dip.

Culmination of the mean annual increment (CMAI).

The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deep soil. A soil that is 40 to 60 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Delta. A body of alluvium having a surface that is nearly flat and fan shaped, deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Depth to rock (in tables). Bedrock is too near the surface for the specified use.

Desert pavement. On a desert surface, a layer of gravel or larger fragments that was emplaced by upward movement of the underlying sediments or that remains after finer particles have been removed by running water or the wind.

Dip slope. A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Divided-slope farming. A form of field stripcropping in which crops are grown in a systematic arrangement

of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

Dominant trees. Trees whose crowns form the general level of the forest canopy and that receive full light from above and from the sides.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized: excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."

Drainage, surface. Runoff, or surface flow of water, from an area.

Drainageway. An area of ground at a lower elevation than the surrounding ground and in which water collects and is drained to a closed depression or lake or to a drainageway at a lower elevation. A drainageway may or may not have distinctly incised channels at its upper reaches or throughout its course.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Dune. A mound, ridge, or hill of loose, windblown granular material (generally sand), either bare or covered with vegetation.

Ecological Site. A distinctive kind of rangeland or grazed forestland that has a unique historic potential native plant community. Ecological sites are the products of all the environmental factors that affect their development. An ecological site is capable of supporting a native plant community that has a unique kind and/or proportion of species or total vegetative production. Ecological sites in grazed forestland include both overstory and understory vegetation.

Effervescence. The quality of a soil measured when drops of diluted (1:10) hydrochloric acid (HCL) are added to the soil. The ratings are as follows:

Very slightly effervescent few bubbles
Slightly effervescent bubbles readily
Strongly effervescent bubbles form low foam

Violently effervescent bubbles form thick foam quickly

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Eolian soil material. Earthy parent material accumulated through wind action; commonly refers to sandy material in dunes or to loess in blankets on the surface.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion pavement. A layer of gravel or stones that remains on the surface after fine particles are removed by sheet or rill erosion.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Synonym: scarp.

Even aged. Refers to a stand of trees in which only small differences in age occur between the individuals. A range of 20 years is allowed.

Excess alkali (in tables). Excess exchangeable sodium in the soil. The resulting poor physical properties restrict the growth of plants.

Excess fines (in tables). Excess silt and clay in the soil. The soil does not provide a source of gravel or sand for construction purposes.

Excess lime (in tables). Excess carbonates in the soil that restrict the growth of some plants.

Excess salts (in tables). Excess water-soluble salts in the soil that restrict the growth of most plants.

Excess sodium (in tables). Excess exchangeable sodium in the soil. The resulting poor physical properties restrict the growth of plants.

Excess sulfur (in tables). Excessive amount of sulfur in the soil. The sulfur causes extreme acidity if the soil is drained, and the growth of most plants is restricted.

Extrusive rock. Igneous rock derived from deep-seated molten matter (magma) emplaced on the earth's surface.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fan apron. A sheet-like mantle of relatively young alluvium covering part of an older fan piedmont surface. It somewhere buries a soil that can be traced to the edge of the fan apron.

Fan piedmont. The most extensive landform on piedmont slopes, formed by the coalescence of alluvial fans or accretions of fan aprons into one generally smooth slope.

Fan remnant. A general term for landforms that are remaining parts of older fan-landforms, that either have been dissected or partially buried.

Fan skirt. The zone of smooth, laterally-coalescing, small alluvial fans that issue from gullies cut into the fan piedmont or that are the coalescing extensions of inset fans of the fan piedmont, and that merge with the basin floor.

Fast intake (in tables). The rapid movement of water into the soil.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the oven-dry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a

soaking rain; also called *normal field capacity*, *normal moisture capacity*, or *capillary capacity*.

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of fire fighters and equipment. Designated roads also serve as firebreaks.

First bottom. The normal flood plain of a stream, subject to frequent or occasional flooding.

Flaggy soil material. Material that is, by volume, 15 to 35 percent flagstones. Very flaggy soil material is 35 to 60 percent flagstones, and extremely flaggy soil material is more than 60 percent flagstones.

Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain. A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

Fluvial. Of or pertaining to rivers; produced by river action, as a fluvial plain.

Foothill. A steeply sloping upland that has relief of as much as 1,000 feet (300 meters) and fringes a mountain range or high-plateau escarpment.

Foot slope. The inclined surface at the base of a hill.

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Fragile (in tables). A soil that is easily damaged by use or disturbance.

Frost action (in tables). Freezing and thawing of soil moisture. Frost action can damage roads, buildings and other structures, and plant roots.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gilgai. The microrelief of clayey soils that shrink and swell considerably with changes in moisture content. Usually manifested as a succession of microbasins and microknolls in nearly level areas or of microvalleys and microridges parallel with the slope.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded strip cropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as

protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that is 15 to 50 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of underlying material below the water table.

Gully. A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Gypsum. A mineral consisting of hydrous calcium sulfate.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Heavy metal. Inorganic substances that are solid at ordinary temperatures and are not soluble in water. They form oxides and hydroxides that are basic. Examples are copper, iron, cadmium, zinc, manganese, lead, and arsenic.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A natural elevation of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.

Holocene. The epoch of the Quaternary Period of geologic time, extending from the end of the

Pleistocene Epoch (about 10 to 12 thousand years ago) to the present.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. The major horizons of mineral soil are as follows:

O horizon.--An organic layer of fresh and decaying plant residue.

A horizon.--The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.--The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.--The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.--The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.--Soft, consolidated bedrock beneath the soil.

R layer.--Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock. Rock formed by solidification from a molten or partially molten state. Major varieties include plutonic and volcanic rock. Examples are andesite, basalt, and granite.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Inset fan. A special case of the flood plain of an ephemeral stream that is confined between fan remnants, basin-floor remnants, ballenas, or closely opposed fan toeslopes.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives groundwater discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Intermontane basin. A generic term for wide structural depressions between mountain ranges that are partly

filled with alluvium. They may be drained internally (bolsons) or externally (semi-bolsons).

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions. Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin.--Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.--Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes or borders.

Controlled flooding.--Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.--Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).--Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.--Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.--Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation.--Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding.--Water, released at high points, is allowed to flow onto an area without controlled distribution.

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Lagoon. The nearly level, filled depression behind the longshore bar on a barrier beach.

Lake plain. A surface marking the floor of an extinct lake, filled in by well sorted, stratified sediments.

Lake terrace. The narrow shelf produced along a lake shore and later exposed when the water recedes.

Lamella. A thin, generally horizontal layer of fine material illuviated within a very much thicker, coarser, eluviated layer.

Landform. Any recognizable form or feature on the earth's surface, having a characteristic shape, and produced by natural causes that provide an empirical description of similar portions of the earth's surface.

Landscape. A collection of related, natural landforms.

Landslide. The rapid downhill movement of a mass of soil and loose rock, generally when wet or saturated. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loamy soil. Coarse sandy loam, sandy loam, fine sandy loam, very fine sandy loam, loam, silt loam, silt, clay loam, sandy clay loam, or silty clay loam.

Loess. Fine grained material, dominantly of silt-sized particles, deposited by wind.

Longshore bar. A narrow, elongate, coarse-textured ridge, built by the wave action of a pluvial lake, that extends parallel to the shore and separated it from a lagoon; both the bar and lagoon are now relict features.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Low strength. The soil is not strong enough to support loads.

Marl. An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal amounts.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

Mean annual increment (MAI). The average annual increase in volume of a tree during the entire life of the tree.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Merchantable trees. Trees that are of sufficient size to be economically processed into wood products.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement. Nearly all such rocks are crystalline.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. An area that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately deep soil. A soil that is 20 to 40 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance--*few*, *common*, and *many*; size--*fine*, *medium*, and *coarse*; and contrast--*faint*, *distinct*, and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium*, from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse*, more than 15 millimeters (about 0.6 inch).

Mountain. A natural elevation of the land surface, rising more than 1,000 feet above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range.

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Mudstone. Sedimentary rock formed by induration of silt and clay in approximately equal amounts.

Munsell notation. A designation of color by degrees of three simple variables--hue, value, and chroma. For

example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Natric horizon. A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil. A soil having a pH value between 6.6 and 7.3. (See Reaction, soil.)

Nodules. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Observed rooting depth. Depth to which roots have been observed to penetrate.

Organic matter. Plant and animal residue in the soil in various stages of decomposition.

Overstory. The trees in a forest that form the upper crown cover.

Oxbow. The horseshoe-shaped channel of a former meander, remaining after the stream formed a cutoff across a narrow meander neck.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan*, *fragipan*, *claypan*, *plowpan*, and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Parna dune. An eolian dune built of sand size aggregates of clayey material that commonly occurs leeward of a playa.

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pediment. A gently sloping erosional surface developed at the foot of a receding hill or mountain slope.

Pedisediment. A thin layer of alluvial material that mantles an erosion surface and has been transported to its present position from higher lying areas of the erosion surface.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10

square meters), depending on the variability of the soil.

Percolation. The downward movement of water through the soil.

Percolates slowly (in tables). The slow movement of water through the soil adversely affects the specified use.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

Extremely slow.....	0.00 to 0.01 inch
Very slow	0.01 to 0.06 inch
Slow.....	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate.....	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Piedmont slope. The dominant slope at the foot of a mountain. Main components of the piedmont slope include pediments, alluvial fans, fan piedmonts, fan skirts and inset fans.

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plateau. An extensive upland mass with relatively flat summit area that is considerably elevated (more than 100 meters) above adjacent lowlands and separated from them on one or more sides by escarpments.

Playa. The generally dry and nearly level lake plain that occupies the lowest parts of closed depressional areas, such as those on intermontane basin floors. Temporary flooding occurs primarily in response to precipitation and runoff.

Pleistocene. The epoch of the Quaternary Period of geologic time preceding the Holocene (from approximately 10 thousand to 2 million years ago).

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Pluvial. Relating to former periods of abundant rains.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poor filter (in tables). Because of rapid or very rapid permeability, the soil may not adequately filter effluent from a waste disposal system.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Poor outlets (in tables). Refers to areas where surface or subsurface drainage outlets are difficult or expensive to install.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Quartzite, metamorphic. Rock consisting mainly of quartz that formed through recrystallization of quartz-rich sandstone or chert.

Quaternary. The period of geologic time, extending from about 2 million years ago to the present and comprising two epochs, the Pleistocene (Ice Age) and Holocene (Recent).

Quartzite, sedimentary. Very hard but unmetamorphosed sandstone consisting chiefly of quartz grains.

Range condition. The present composition of the plant community on a range site in relation to the potential natural plant community for that site. Range condition is expressed as excellent, good, fair, or poor on the basis of how much the present plant community has departed from the potential.

Rangeland. Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

Range site. An area of rangeland where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. A range site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other range sites in kind or proportion of species or total production.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid.....	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid.....	5.6 to 6.0
Slightly acid.....	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	(mildly alkaline) 7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline.....	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous

wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Regeneration. The new growth of a natural plant community, developing from seed.

Regolith. The unconsolidated mantle of weathered rock and soil material on the earth's surface; the loose earth material above the solid rock.

Relict stream terrace. One of a series of platforms in or adjacent to a stream valley that formed prior to the current stream system.

Relief. The elevations or inequalities of a land surface, considered collectively.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

Rill. A steep-sided channel resulting from accelerated erosion. A rill is generally a few inches deep and not wide enough to be an obstacle to farm machinery.

Riverwash. Unstable areas of sandy, silty, clayey, or gravelly sediments. These areas are flooded, washed, and reworked by rivers so frequently that they support little or no vegetation.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Rock outcrop. Exposures of bare bedrock other than lava flows and rock-lined pits.

Rooting depth (in tables). Shallow root zone. The soil is shallow over a layer that greatly restricts roots.

Root zone. The part of the soil that can be penetrated by plant roots.

Rubble land. Areas that have more than 90 percent of the surface covered by stones or boulders. Voids contain no soil material and virtually no vegetation other than lichens. The areas commonly are at the base of mountain slopes, but some are on mountain slopes as deposits of cobbles, stones, and boulders left by Pleistocene glaciation or by periglacial phenomena.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called groundwater runoff or seepage flow from ground water.

Saline soil. A soil containing soluble salts in an amount that impairs the growth of plants. A saline soil does not contain excess exchangeable sodium.

Salinity. The electrical conductivity of a saline soil. It is expressed, in millimhos per centimeter, as follows:

Nonsaline.....	0 to 2
Very slightly saline.....	2 to 4
Slightly saline.....	4 to 8
Moderately saline.....	8 to 16
Strongly saline.....	More than 16

Salty water (in tables). Water that is too salty for consumption by livestock.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sand sheet. A large, irregularly shaped, surficial mantle of eolian sand.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sandy soil. Sand or loamy sand.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saprolite. Unconsolidated residual material underlying the soil and grading to hard bedrock below.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Sawlogs. Logs of suitable size and quality for the production of lumber.

Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Scribner's log rule. A method of estimating the number of board feet that can be cut from a log of a given diameter and length.

Second bottom. The first terrace above the normal flood plain (or first bottom) of a river.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Seepage (in tables). The movement of water through the soil. Seepage adversely affects the specified use.

Semi-bolson. An intermontane basin that is drained externally by an intermittent stream.

Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock formed by the hardening of a clay deposit.

Shallow soil. A soil that is 10 to 20 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shelterwood system. A forest management system requiring the removal of a stand in a series of cuts so that regeneration occurs under a partial canopy. After regeneration, a final cut removes the shelterwood and allows the stand to develop in the open as an even-aged stand. The system is well suited to sites where shelter is needed for regeneration, and it can aid regeneration of the more intolerant tree species in a stand.

Shoulder slope. The uppermost inclined surface at the top of a hillside. It is the transition zone from the back slope to the summit of a hill or mountain. The surface is dominantly convex in profile and erosional in origin.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Shrub-coppice dune. A small dune that forms around shrubs or small trees.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone. Sedimentary rock made up of dominantly silt-sized particles.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Sinkhole. A depression in the landscape where limestone has been dissolved.

Site class. A grouping of site indexes into five to seven production capability levels. Each level can be represented by a site curve.

Site curve (50-year). A set of related curves on a graph that shows the average height of dominant or dominant and co-dominant trees for the range of ages on soils that differ in productivity. Each level is represented by a curve. The basis of the curves is the height of dominant or dominant and co-dominant trees that are 50 years old or are 50 years old at breast height.

Site curve (100-year). A set of related curves on a graph that shows the average height of dominant or dominant and co-dominant trees for a range of ages on soils that differ in productivity. Each level is represented by a curve. The basis of the curves is the height of dominant or dominant and co-dominant trees that are 100 years old or are 100 years old at breast height.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and co-dominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Skid trails. Pathways along which logs are dragged to a common site for loading onto a logging truck.

Slash. The branches, bark, treetops, reject logs, and broken or uprooted trees left on the ground after logging.

Slickens. Accumulations of fine-textured material, such as material separated in placer-mine and ore-mill operations. Slickens from ore mills commonly consist of freshly ground rock that has undergone chemical treatment during the milling process.

Slickensides. Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.

Slick spot. A small area of soil having a puddled, crusted, or smooth surface and an excess of exchangeable sodium. The soil generally is silty or clayey, is slippery when wet, and is low in productivity.

Slippage (in tables). Soil mass susceptible to movement downslope when loaded, excavated, or wet.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, the following slope classes are recognized:

Nearly level	0 to 2 percent
Gently sloping	2 to 4 percent
Moderately sloping.....	4 to 8 percent

Strongly sloping	8 to 15 percent
Moderately steep.....	15 to 30 percent
Steep	30 to 50 percent
Very steep.....	50 to 75 percent
Extremely steep	75 percent and higher

Slope (in tables). Slope is great enough that special practices are required to ensure satisfactory performance of the soil for a specific use.

Slow intake (in tables). The slow movement of water into the soil.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Small stones (in tables). Rock fragments less than 3 inches (7.6 centimeters) in diameter. Small stones adversely affect the specified use of the soil.

Sodic (alkali) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Sodicity. The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of Na^+ to $Ca^{++} + Mg^{++}$. The degrees of sodicity and their respective ratios are:

Very slight	5-12:1
Slight.....	13-30:1
Moderate.....	31-45:1
Strong	46-90:1
Very strong.....	more than 90:1

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand.....	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt.....	0.05 to 0.002
Clay.....	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are

active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Species. A single, distinct kind of plant or animal having certain distinguishing characteristics.

Stone line. A concentration of coarse fragments in a soil. Generally, it is indicative of an old weathered surface. In a cross section, the line may be one fragment or more thick. It generally overlies material that weathered in place and is overlain by recent sediment of variable thickness.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Strath terrace. A surface cut formed by the erosion of hard or semi-consolidated bedrock and thinly mantled with stream deposits.

Stream channel. The hollow bed where a natural stream of surface water flows or may flow; the deepest or central part of the bed, formed by the main current and covered more or less continuously by water.

Stream terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel. It originally formed near the level of the stream and is the dissected remnants of an abandoned flood plain, streambed, or valley floor that were produced during a former stage of erosion or deposition.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to soil blowing and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are: *platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grain* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summer fallow. The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

Summit. A general term for the top, or highest level, of an upland feature, such as a hill or mountain. It commonly refers to a higher area that has a gentle slope and is flanked by steeper slopes.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the "plow layer" or the "Ap horizon."

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Tailwater. The water directly downstream of a structure.

Talus. Fragments of rock and other soil material accumulated by gravity at the foot of cliffs or steep slopes.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field is generally built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geologic). A step-like surface, ordinarily flat or undulating, bordering a river, a lake, or the sea representing a former flood plain.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand*, *loamy sand*, *sandy loam*, *loam*, *silt loam*, *silt*, *sandy clay loam*, *clay loam*, *silty clay loam*, *sandy clay*, *silty clay*, and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."

Thin layer (in tables). Otherwise suitable soil material too thin for the specified use.

Till plain. An extensive area of nearly level to undulating soils underlain by glacial till.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toe slope. The outermost inclined surface at the base of a hill; part of a foot slope.

Too arid (in tables). The soil is dry most of the time, and vegetation is difficult to establish.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Toxicity (in tables). Excessive amount of toxic substances, such as sodium or sulfur, that severely hinder establishment of vegetation or severely restrict plant growth.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Trafficability. The degree to which a soil is capable of supporting vehicular traffic across a wide range in soil moisture conditions.

Tread. The relatively flat terrace surface that was cut or built by stream or wave action.

Tuff. A compacted deposit that is 50 percent or more volcanic ash and dust.

Understory. Any plants in a forest community that grow to a height of less than 5 feet.

Unstable fill (in tables). Risk of caving or sloughing on banks of fill material.

Upland (geology). Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Valley. An elongated depressional area primarily developed by stream action.

Valley fill. In glaciated regions, material deposited in stream valleys by glacial meltwater. In nonglaciated regions, alluvium deposited by heavily loaded streams.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Very deep soil. A soil that is more than 60 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Very shallow soil. A soil that is less than 10 inches deep over bedrock or to other material that restricts the penetration of plant roots.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity

of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Waterspreading. Diverting runoff from natural channels by means of a system of dams, dikes, or ditches and spreading it over relatively flat surfaces.

Water supplying capacity. The total amount of water available in the soil for plant growth in a normal year from precipitation and from runoff from higher areas. Runoff and water lost to deep percolation are not included.

Weathering. All physical and chemical changes produced in rocks or other deposits at or near the earth's

surface by atmospheric agents. These changes result in disintegration and decomposition of the material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an oven-dry basis, at which a plant (specifically, a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

TABLES

TABLE 1.—TEMPERATURE AND PRECIPITATION
(Recorded in the periods 1961-90 at Wells, Nevada)

Month	Temperature (Degrees F.)						Precipitation (Inches)				
	Average daily maximum	Average daily minimum	Average daily	Maximum temperature higher than	Minimum temperature less than	2 years in 10 will have-- Average number of growing degree days*	Average	2 years in 10 will have-- less than	more than	Average number of days with 0.01 inch or more	Average snow fall
January	35.3	10.6	22.9	55	-21	2	0.78	0.30	1.19	2	9.1
February	40.1	16.2	28.2	59	-16	7	0.78	0.29	1.19	2	8.1
March	46.8	22.2	34.5	67	-5	31	0.95	0.43	1.40	3	8.8
April	56.5	27.2	41.9	77	8	123	0.94	0.39	1.40	3	5.0
May	66.3	34.4	50.4	86	15	332	1.21	0.45	1.84	3	2.0
June	77.0	41.8	59.4	95	25	581	1.10	0.24	1.76	3	0.1
July	87.3	47.8	67.5	97	33	853	0.50	0.16	0.80	1	0.0
August	84.9	45.7	65.3	96	28	784	0.60	0.14	1.00	1	0.0
September	74.9	36.6	55.7	90	16	475	0.91	0.26	1.61	2	0.1
October	62.6	27.3	45.0	81	6	196	0.80	0.24	1.31	2	1.4
November	46.3	20.6	33.5	68	-6	29	1.05	0.52	1.51	3	6.5
December	36.1	11.4	23.8	55	-21	3	0.99	0.23	1.59	3	11.3
Yearly :											
Average---	59.5	28.5	44.0	---	---	---	---	---	---	---	---
Extreme	98	-36	---	98	-25	---	---	---	---	---	---
Total	---	---	---	---	---	3,417	10.61	7.91	13.08	28	52.4

Average number of days per year with at least 1 inch of snow on the ground: 68

*A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (40 degrees F.)

TABLE 1.—TEMPERATURE AND PRECIPITATION

(Recorded in the period 1961-90 at Ruby Lake, Nevada)

Month	Temperature (Degrees F.)						Precipitation (Inches)				
	Average daily maximum	Average daily minimum	Average daily	Maximum temperature higher than	Minimum temperature less than	2 years in 10 will have-- Average number of growing degree days*	Average	2 years in 10 will have-- less than	more than	Average number of days with 0.01 inch or more	Average snow fall
January	39.4	14.1	26.7	59	-18	8	1.25	0.45	1.92	3	10.2
February	43.6	18.8	31.2	63	-11	17	1.18	0.41	1.81	3	8.0
March	49.0	24.6	36.8	68	1	56	1.29	0.58	1.90	3	6.7
April	57.5	30.6	44.1	77	15	165	1.10	0.57	1.56	3	2.5
May	67.3	38.2	52.8	86	22	401	1.35	0.41	2.11	3	1.3
June	78.0	45.4	61.7	94	29	626	0.95	0.26	1.56	2	0.0
July	87.3	51.9	69.6	97	39	880	0.56	0.15	0.96	1	0.0
August	85.3	49.6	67.5	96	34	807	0.81	0.19	1.34	2	0.0
September	75.9	40.9	58.4	90	22	535	0.88	0.26	1.49	2	0.2
October	64.9	31.7	48.3	82	12	272	1.07	0.36	1.65	2	1.0
November	49.2	23.8	36.5	69	0	56	1.41	0.78	2.06	4	3.8
December	40.0	15.4	27.7	58	-16	6	1.45	0.36	2.40	3	8.9
Yearly:											
Average	61.4	32.1	46.8	---	---	---	---	---	---	---	---
Extreme	102	-29	---	98	-21	---	---	---	---	---	---
Total	---	---	---	---	---	3,828	13.29	10.09	16.15	31	42.4

Average number of days per year with at least 1 inch of snow on the ground: 24

*A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (40 degrees F.)

TABLE 2.--FREEZE DATES IN SPRING AND FALL
(Recorded in the period 1961-90 at Wells, Nevada)

Probability	Temperature		
	24 degrees F. or lower	28 degrees F. or lower	32 degrees F. or lower
Last freezing temperature in spring:			
1 year in 10 later than--	June 6	June 20	July 8
2 years in 10 later than--	May 30	June 13	July 2
5 years in 10 later than--	May 16	May 29	June 19
First freezing temperature in fall:			
1 year in 10 earlier than--	September 4	August 23	August 11
2 years in 10 earlier than--	September 11	August 31	August 18
5 years in 10 earlier than--	September 24	September 14	August 29

TABLE 2.--FREEZE DATES IN SPRING AND FALL
(Recorded in the period 1961-90 at Ruby Lake, Nevada)

Probability	Temperature		
	24 degrees F. or lower	28 degrees F. or lower	32 degrees F. or lower
Last freezing temperature in spring:			
1 year in 10 later than--	May 8	June 9	June 20
2 years in 10 later than--	May 4	June 1	June 13
5 years in 10 later than--	April 27	May 16	June 1
First freezing temperature in fall:			
1 year in 10 earlier than--	September 19	September 12	August 28
2 years in 10 earlier than--	September 24	September 17	September 4
5 years in 10 earlier than--	October 4	September 28	September 16

TABLE 3.—GROWING SEASON
(Recorded in the period 1948-1993 at Wells, Nevada.)

Probability	Daily Minimum Temperature		
	Higher than 24 degrees F.	Higher than 28 degrees F.	Higher than 32 degrees F.
	<u>Days</u>	<u>Days</u>	<u>Days</u>
9 years in 10	94	68	35
8 years in 10	105	79	45
5 years in 10	125	100	65
2 years in 10	145	120	85
1 year in 10	156	131	96

TABLE 3.—GROWING SEASON
(Recorded in the period 1961-90 at Ruby Lake, Nevada.)

Probability	Daily Minimum Temperature		
	Higher than 24 degrees F.	Higher than 28 degrees F.	Higher than 32 degrees F.
	<u>Days</u>	<u>Days</u>	<u>Days</u>
9 years in 10	140	104	80
8 years in 10	147	115	90
5 years in 10	159	134	109
2 years in 10	172	154	128
1 year in 10	179	164	138

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS

Map symbol	Soil name	Acres	percent
053	Palinor-Urmafot association-----	18,772	0.6
062	Amtoft-Rock outcrop association-----	8,927	0.3
066	Zimbob association-----	24,824	0.9
067	Tecomar-Tecomar, dry-Pookaloo association-----	54,669	1.9
069	Zimbob-Hyzen-Rock outcrop association-----	11,382	0.4
070	Stewval-Eastwell association-----	5,176	0.2
071	Stewval-Wesfil-Rock outcrop association-----	3,441	0.1
080	Stewval very gravelly fine sandy loam, 8 to 30 percent slopes-----	1,820	*
092	Wesfil-Wintermute-Okan association-----	7,112	0.2
098	Wesfil-Tarnach association-----	24,522	0.8
099	Wesfil-Armespan-Heist association-----	1,959	*
100	Benin-Mazuma association-----	4,313	0.1
101	Toano-Linoyer association-----	5,095	0.2
103	Benin-Playas association-----	12,985	0.4
111	Gravier-Armespan association-----	17,731	0.6
113	Gravier-Jericho association-----	8,919	0.3
116	Gravier-Izamatch-Loray association-----	19,827	0.7
118	Gravier-Automal-Zerk association-----	5,465	0.2
119	Wintermute-Linoyer association-----	8,919	0.3
120	Izamatch-Armespan-Cliffdown association-----	16,281	0.6
122	Gravier-Izamatch association-----	6,131	0.2
130	Tooele-Benin association-----	5,060	0.2
140	Gollaher-Belsac association-----	5,457	0.2
151	Hopeka-Amene-Rock outcrop association-----	3,408	0.1
154	Hopeka-Tecomar association-----	20,104	0.7
160	Saltair-Kawich association-----	5,036	0.2
161	Saltair-Playas association-----	10,609	0.4
171	Loray-Gravier-Toano association-----	11,540	0.4
173	Cliffdown-Armespan-Izamatch association-----	9,016	0.3
174	Wintermute-Linoyer-Okan association-----	4,044	0.1
175	Loray-Wintermute association-----	13,981	0.5
176	Zerk-Loray association-----	4,890	0.2
181	Peeko-Dewar association-----	3,134	0.1
182	Peeko-Gance association-----	4,071	0.1
183	Peeko-Enko-Izar association-----	7,921	0.3
185	Peeko-Chiara association-----	7,511	0.3
186	Palinor-Pharo-Hundraw association-----	12,124	0.4
187	Peeko-Izar association-----	6,688	0.2
188	Palinor-Automal-Izar association-----	7,999	0.3
192	Hutchley-Simon association-----	2,050	*
201	Tecomar-Hopeka-Rock outcrop association-----	3,633	0.1
203	Tecomar-Pookaloo-Pharo association-----	7,574	0.3
210	Mazuma-Hardhat-Loray association-----	4,460	0.2
211	Valmy-Enko association-----	3,294	0.1
230	Zafod-Pyrat-Palinor association-----	7,743	0.3
231	Dacker-Nevador-Kelk association-----	2,894	*
240	Hundraw-Cobre association-----	6,223	0.2
241	Hundraw-Peeko-Kzin association-----	7,869	0.3
242	Cobre-Hundraw-Chiara association-----	5,075	0.2
244	Hundraw-Shabliss-Palinor association-----	3,786	0.1
250	Izar-Holborn-Kzin association-----	5,438	0.2
251	Izar-Palinor-Shabliss association-----	5,531	0.2
252	Izar-Hundraw-Okan association-----	3,530	0.1
260	Dewar-Chiara-Hunnton association-----	12,591	0.4
270	Chiara-Kelk association-----	938	*
273	Chiara-Dewar-Enko association-----	15,723	0.5
276	Chiara-Peeko-Urmafot association-----	10,390	0.4
279	Chiara-Parisa-Enko association-----	1,623	*
280	Oupico-Enko association-----	3,490	0.1
282	Shabliss-Pyrat-Okan association-----	8,334	0.3
310	Sonoma-Devilsgait association-----	344	*
311	Sonoma-Kelk association-----	541	*
330	Kzin-Holborn association-----	2,309	*
331	Kzin-Cobre-Jackpot association-----	1,523	*

See footnote at end of table.

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Map symbol	Soil name	Acres	percent
333	Kzin-Holborn-Onkeyo association-----	500	*
340	Shuttle-Hardhat association-----	3,411	0.1
350	Jericho-Jericho, silt loam association-----	1,726	*
351	Shabliss-Okan-Eastwell association-----	16,139	0.6
355	Shabliss-Okan association-----	6,613	0.2
370	Toano-Tulase association-----	2,434	*
371	Linoyer-Okan association-----	11,649	0.4
373	Timpie-Piltown-Linoyer association-----	7,140	0.2
374	Heist-Okan-Zerk association-----	5,100	0.2
375	Toano-Heist association-----	9,441	0.3
380	Cobre-Izar-Jackpot association-----	5,309	0.2
381	Cobre-Hundraw-Jackpot association-----	300	*
382	Cobre-Enko association-----	4,399	0.2
390	Hardol-Muiral-Rubble land association-----	5,963	0.2
392	Hardol-Muiral-Onkeyo association-----	350	*
400	Cleavage-Sumine association-----	12,402	0.4
410	Jericho very gravelly loam, 2 to 8 percent slopes-----	10,178	0.4
411	Jericho-Armaspan association-----	7,795	0.3
420	Palinor association-----	18,781	0.6
421	Palinor-Automal association-----	24,074	0.8
422	Palinor-Zimbo-Okan association-----	2,972	0.1
424	Palinor-Hundraw-Okan association-----	5,247	0.2
426	Palinor-Automal-Wintermute association-----	10,553	0.4
429	Palinor-Automal-Palinor, eroded association-----	16,308	0.6
430	Graley-Ploche-Cropper association-----	16,160	0.6
431	Graley-Chen-McIvey association-----	2,281	*
440	Lomoline-Bijorja association-----	4,568	0.2
460	Okan-Automal-Hundraw association-----	3,595	0.1
470	Rozara-Cucamungo-Rock outcrop association-----	1,335	*
471	Cucamungo-Hendap-Rock outcrop association-----	5,741	0.2
480	Shabliss-Palinor association-----	30,890	1.1
485	Shabliss-Parisa-Hunton association-----	1,967	*
490	Wintermute-Automal association-----	49,598	1.7
492	Wintermute-Peeko-Hundraw association-----	14,843	0.5
494	Wintermute-Pyrat-Automal association-----	5,014	0.2
496	Sodhouse-Linoyer association-----	4,232	0.1
497	Sodhouse-Palinor association-----	4,453	0.2
501	Pharo-Izar-Okan association-----	2,587	*
503	Automal-Okan-Wintermute association-----	15,609	0.5
504	Automal-Wintermute association-----	11,071	0.4
510	Adobe-Haunchee-Hardzem association-----	5,469	0.2
511	Adobe-Wardbay-Hardol association-----	18,121	0.6
512	Adobe-Cavehill-Wardbay association-----	4,332	0.1
520	Haunchee-Muiral-Wardbay association-----	4,690	0.2
530	Wardbay-Adobe-Haunchee association-----	19,786	0.7
532	Onkeyo-Pookaloo-Tecomar association-----	11,114	0.4
540	Kunzler-Sycomat association-----	16,679	0.6
541	Kunzler-Sheffit association-----	7,702	0.3
550	Urmafot-Bobs-Urmafot, eroded association-----	19,593	0.7
551	Urmafot-Bobs association-----	11,175	0.4
552	Urmafot-Pharo association-----	5,412	0.2
554	Urmafot-Tecomar association-----	3,250	0.1
561	Palinor-Urmafot-Palinor, steep association-----	13,888	0.5
562	Bobs very gravelly loam, 2 to 8 percent slopes-----	8,555	0.3
563	Bobs-Pyrat association-----	2,574	*
575	Pookaloo-Cavehill-Rock outcrop association-----	122,192	4.2
576	Pookaloo-Tecomar-Onkeyo association-----	15,212	0.5
582	Sheffit-Katelana association-----	10,512	0.4
590	Upatad-Segura association-----	10,434	0.4
600	Onkeyo-Amene-Pookaloo association-----	9,244	0.3
610	Wintermute-Eastwell association-----	16,951	0.6
614	Wintermute-Eastwell-Zerk association-----	18,243	0.6
617	Wintermute-Zerk-Loray association-----	6,047	0.2
620	Atlow association-----	4,276	0.1

See footnote at end of table.

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Map symbol	Soil name	Acres	percent
631	Eastwell-Wintermute-Okan association-----	17,249	0.6
632	Eastwell-Zafod association-----	1,756	*
634	Eastwell-Shabliss-Izar association-----	4,894	0.2
636	Eastwell-Hundraw-Okan association-----	3,216	0.1
650	Mizpah-Zerk-Wintermute association-----	500	*
671	Idway-Mysol association-----	3,570	0.1
672	Idway-James Canyon, drained association-----	3,276	0.1
680	Simon-Graley-Chen association-----	5,622	0.2
691	Tarnach-Wesfil association-----	35,246	1.2
692	Tarnach-Upatad-Wesfil association-----	20,521	0.7
700	Shabliss-Tulase-Linoyer association-----	3,999	0.1
720	Mysol association-----	3,021	0.1
730	Idway-Kawich-Mysol association-----	7,543	0.3
733	Idway-Idway, moist-Mysol association-----	14,775	0.5
740	Upatad-Fioche-Tarnach association-----	4,318	0.1
760	Playas, 0 to 1 percent slopes-----	7,873	0.3
761	Umblerland association-----	6,562	0.2
762	Umblerland-Playas association-----	5,167	0.2
763	Equis-Umblerland-Duffer association-----	5,428	0.2
764	Umblerland-Rubylake-Orupa association-----	2,448	*
765	Umblerland-Wendane association-----	10,986	0.4
767	Umblerland-Orupa association-----	1,900	*
781	Mysol-Benin-Wendane association-----	2,733	*
800	Mazuma-Toano association-----	12,435	0.4
801	Mazuma-Zerk-Okan association-----	5,584	0.2
804	Mazuma-Kawich-Playas association-----	5,768	0.2
807	Mazuma-Kunzler-Zerk association-----	2,491	*
823	Kunzler-Pyrat-Blimo association-----	6,431	0.2
824	Kunzler-Katelana association-----	1,681	*
827	Kunzler-James Canyon association-----	6,846	0.2
828	Kunzler-Pyrat-Wendane association-----	2,484	*
830	Pharo-Kzin association-----	2,881	*
842	Katelana-Timpie association-----	10,297	0.4
843	Katelana-Kawich association-----	2,104	*
845	Katelana-Ragtown-Timpie association-----	36,903	1.3
847	Mazuma-Blimo-Wintermute association-----	2,990	0.1
850	Palinor-Wintermute-Okan association-----	4,332	0.1
851	Palinor-Zimbo-Tecomar association-----	7,558	0.3
852	Palinor-Pyrat-Shabliss association-----	5,404	0.2
854	Palinor-Automal-Shabliss association-----	9,800	0.3
856	Palinor-Parisa association-----	10,939	0.4
857	Palinor-Shabliss-Linoyer association-----	10,554	0.4
858	Palinor-Automal-Linoyer association-----	3,762	0.1
870	Theriot-Zimbo association-----	6,461	0.2
880	Duffer, drained-Duffer-Kolda association-----	10,489	0.4
881	Duffer-Kunzler association-----	15,774	0.5
882	Duffer-Kolda association-----	3,242	0.1
894	Zerk-Threesee-Mazuma association-----	5,793	0.2
900	Zerk-Automal-Linoyer association-----	5,954	0.2
910	Ragtown association-----	11,675	0.4
912	Katelana association-----	78,929	2.7
914	Katelana-Benin-Sheffit association-----	5,210	0.2
917	Katelana-Sheffit-Ragtown association-----	55,246	1.9
918	Katelana-Zorravista-Playas association-----	17,199	0.6
930	Okan-Toano-Loray association-----	2,387	*
932	Okan-Pyrat association-----	2,957	0.1
941	Sheffit-Zorravista association-----	9,106	0.3
943	Sheffit-Umblerland association-----	12,902	0.4
960	Gravier-Zerk association-----	4,047	0.1
961	Gravier-Piltdown-Zerk association-----	4,887	0.2
972	Zimbo-Pookaloo association-----	13,663	0.5
974	Zimbo-Tecomar-Pookaloo association-----	10,104	0.3
975	Tecomar-Zimbo association-----	28,837	1.0
980	Onkeyo-Pookaloo-Zimbo association-----	8,054	0.3

See footnote at end of table.

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Map symbol	Soil name	Acres	percent
990	Hyzen-Zimbov association-----	1,845	*
991	Hyzen-Cavehill-Tecomar association-----	13,850	0.5
1000	Pyrat-Zerk association-----	7,102	0.2
1001	Pyrat-Okan-Eastwell association-----	7,019	0.2
1002	Threesee-Kunzler association-----	7,834	0.3
1003	Pyrat-Hundraw-Tulase association-----	1,945	*
1004	Pyrat-Parisa-Tulase association-----	5,539	0.2
1005	Pyrat-Zerk-Parisa association-----	2,518	*
1006	Pyrat-Blimo association-----	6,045	0.2
1007	Pyrat-Parisa-Automal association-----	4,589	0.2
1009	Pyrat-Tulase-Wintermute association-----	3,141	0.1
1020	Okan-Eastwell-Blimo association-----	5,486	0.2
1023	Okan-Katelana association-----	3,056	0.1
1030	Segura-Bullump-Mutchley association-----	5,117	0.2
1040	Segura-Pioche-Chen association-----	3,652	0.1
1061	Pioche-Cucumungo-Rock outcrop association-----	3,552	0.1
1070	Zafod-Automal-Okan association-----	8,975	0.3
1080	Cotant-Segura association-----	1,503	*
1111	Parisa gravelly loam, 2 to 8 percent slopes-----	11,420	0.4
1120	Okan-Automal association-----	8,018	0.3
1150	Adobe-Wardbay-Haunchee association-----	13,495	0.5
1161	Pharo-Bobs-Pookaloo association-----	9,514	0.3
1171	Pyrat-Automal-Gravier association-----	8,798	0.3
1172	Pyrat-Automal, very stony-Automal association-----	1,596	*
1173	Pyrat-Automal association-----	1,620	*
1174	Pyrat-Tosser association-----	1,300	*
1180	Haunchee-Cavehill association-----	6,360	0.2
1181	Haunchee-Halacan-Wardbay association-----	26,138	0.9
1190	Upatad-Atlow association-----	14,515	0.5
1191	Upatad-Pioche-Rock outcrop association-----	3,750	0.1
1200	Hardol-Hardzem-Rock outcrop association-----	8,833	0.3
1201	Hardol-Rock outcrop-Wardbay association-----	3,912	0.1
1210	Blimo-Kunzler-Linoyer association-----	17,087	0.6
1213	Blimo-Threesee association-----	13,289	0.5
1215	Blimo-Zorravista association-----	3,803	0.1
1216	Blimo-Idway-Mazuma association-----	8,316	0.3
1220	Onkeyo-Adobe-Pookaloo association-----	5,576	0.2
1230	Hardzem-Haunchee-Wardbay association-----	9,169	0.3
1240	Benin association-----	7,161	0.2
1241	Benin, moist-Playas-Benin association-----	7,298	0.3
1250	Tecomar-Pookaloo association-----	10,655	0.4
1270	Katelana-Sheffit association-----	12,465	0.4
1271	Uvada-Ragtown association-----	34,620	1.2
1272	Katelana, cool-Kawich association-----	4,327	0.1
1280	Sycomat-Kunzler association-----	10,245	0.4
1281	Sycomat-Mazuma association-----	5,385	0.2
1290	Heist-Blimo association-----	12,366	0.4
1300	Cavehill-Haunchee-Hardzem association-----	4,106	0.1
1360	Toba-Appian association-----	3,046	0.1
1370	Orupa-Playas-Boofuss association-----	6,192	0.2
1380	Hulderman-Toba-Benin association-----	3,092	0.1
1390	Wendane-Mysol-Toba association-----	8,053	0.3
1410	Threesee-Tosser association-----	11,974	0.4
1411	Threesee-Linoyer-Okan association-----	4,657	0.2
1412	Threesee-Idway association-----	6,236	0.2
1413	Idway-Zorravista-Kunzler association-----	4,964	0.2
1414	Threesee-Shantown-Kunzler association-----	5,911	0.2
1430	Pookaloo-Tecomar-Rock outcrop association-----	27,220	0.9
1440	Boofuss-Equis association-----	1,255	*
1441	Boofuss-Wendane-Umberland association-----	1,204	*
1450	Piltown-Kawich association-----	7,295	0.3
1460	Tosser-Threesee association-----	11,786	0.4
1471	Timpie-Kunzler-Threesee association-----	6,438	0.2
1480	Tulase-Linoyer association-----	6,343	0.2

See footnote at end of table.

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS--Continued

Map symbol	Soil name	Acres	percent
1500	Tooele-Loray association-----	13,542	0.5
1510	Izamatch-Cliffdown association-----	15,149	0.5
1520	Izamatch-Luning association-----	29,435	1.0
1521	Izamatch-Theriot association-----	10,949	0.4
1522	Izamatch-Smaug-Badland association-----	2,708	*
1530	Theriot-Izamatch association-----	9,341	0.3
1531	Theriot-Izamatch-Rock outcrop association-----	3,726	0.1
1532	Theriot-Rock outcrop association-----	4,375	0.2
1540	Amtoft-Kyler association-----	27,185	0.9
1541	Kyler-Rock outcrop association-----	16,960	0.6
1542	Kyler-Amtoft-Jericho association-----	10,037	0.3
1550	Jericho association-----	6,606	0.2
1560	Toano-Timpie association-----	2,201	*
1570	Jericho-Xeric Torriorthents association-----	5,237	0.2
1580	Armespan-Jericho association-----	15,185	0.5
1581	Armespan-Kyler-Heist association-----	6,309	0.2
1582	Armespan-Xeric Torriorthents association-----	3,097	0.1
1590	Luning-Loray association-----	4,606	0.2
1591	Luning-Izamatch-Badland association-----	6,650	0.2
1600	Eaglepass-Amtoft association-----	2,746	*
1610	Xeric Torriorthents-Armespan-Badlands association-----	4,639	0.2
1620	Kolda-Duffer-Sonoma association-----	1,650	*
1621	Kolda-Rubylake association-----	5,454	0.2
1622	Kolda silt loam, 0 to 1 percent slopes-----	2,880	*
1623	Kolda-Water association-----	2,311	*
1630	Pookaloo-Cavehill, cool-Rock outcrop association-----	17,059	0.6
1631	Pookaloo-Tecomar-Wardbay association-----	5,685	0.2
1640	Jungo association-----	8,271	0.3
1650	Shantown-Zorravista association-----	3,107	0.1
1651	Shantown association-----	3,024	0.1
1660	Wendane-Logan association-----	9,177	0.3
1670	Wendane-Logan-Wendane, occasionally flooded association-----	12,092	0.4
1680	Rubylake-Kolda-Wendane association-----	3,346	0.1
1681	Wendane-Logan-Umberland association-----	6,872	0.2
1690	Krenka-Secrepass association-----	2,964	0.1
1700	Heechee-Rubicity association-----	6,979	0.2
1702	Heechee-McIvey-Rubicity association-----	6,113	0.2
1710	James Canyon-Wendane association-----	3,486	0.1
1711	James Canyon-Wendane-Wendane, occasionally flooded association-----	4,252	0.1
1720	Welch loam, 0 to 4 percent slopes-----	4,676	0.2
1721	Welch-Welsum complex-----	12,072	0.4
1722	Welch-Slipback association-----	4,296	0.1
1723	Welch association-----	2,559	*
1730	McIvey-Donna association-----	12,412	0.4
1731	McIvey-Chen-Donna association-----	4,994	0.2
1732	McIvey-Stampede-Heechee association-----	683	*
1740	Slipback-Welch association-----	5,844	0.2
1741	Slipback-Shantown-Toba association-----	5,550	0.2
1750	Heechee-Welch association-----	1,532	*
1760	Lykal-Wendane-James Canyon association-----	3,688	0.1
1770	Donna-McIvey-Heechee association-----	8,040	0.3
1780	Schoer-Welch association-----	7,507	0.3
1790	Donna-Krenka-McIvey association-----	2,459	*
1800	Chen-Graley-Rock outcrop association-----	4,395	0.2
1810	Sumine-Tusel-Hapgood association-----	187	*
1820	Hussa-Halleck-Welsum association-----	2,517	*
1831	Enko-Kelk association-----	2,345	*
1840	Amene-Belsac-Chen association-----	1,676	*
1850	Bullump-Cleavage-Rock outcrop association-----	3,201	0.1
1861	Equis-Devilsgait association-----	2,196	*
1862	Equis-Kolda association-----	732	*
1870	Denied access-----	11,094	0.4
1880	Water-----	2,500	*
	Total-----	2,808,842	96.8

* Less than 0.1 percent.

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE

(Yields are those that can be expected under a high level of irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
0053:				
Palinor-----	---	---	---	---
Urmafot-----	---	---	---	---
0062:				
Amtoft-----	---	---	---	---
Rock Outcrop---	---	---	---	---
Amtoft-----	---	---	---	---
0066:				
Zimbob-----	---	---	---	---
Zimbob-----	---	---	---	---
0067:				
Tecomar-----	---	---	---	---
Tecomar-----	---	---	---	---
Pookaloo-----	---	---	---	---
0069:				
Zimbob-----	---	---	---	---
Hyzen-----	---	---	---	---
Rock Outcrop---	---	---	---	---
0070:				
Stewval-----	---	---	---	---
Eastwell-----	---	---	---	---
0071:				
Stewval-----	---	---	---	---
Wesfil-----	---	---	---	---
Rock Outcrop---	---	---	---	---
0080:				
Stewval-----	---	---	---	---
0092:				
Wesfil-----	---	---	---	---
Wintermute-----	---	---	---	---
Okan-----	---	---	---	---
0098:				
Wesfil-----	---	---	---	---
Tarnach-----	---	---	---	---
Wesfil-----	---	---	---	---
0099:				
Wesfil-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
Armespan-----	---	---	---	---
Heist-----	---	---	---	---
0100: Benin-----	4s	---	---	---
Mazuma-----	2e	---	---	---
0101: Toano-----	---	---	---	---
Linoyer-----	2e	6.0	12.0	---
0103: Benin-----	4s	---	---	---
Playas-----	---	---	---	---
0111: Gravier-----	4e	---	---	---
Armespan-----	---	---	---	---
0113: Gravier-----	4e	---	---	---
Gravier-----	4e	---	---	---
Jericho-----	---	---	---	---
0116: Gravier-----	---	---	---	---
Izamatch-----	---	---	---	---
Loray-----	---	---	---	---
0118: Gravier-----	4e	---	---	---
Automal-----	---	---	---	---
Zerk-----	4e	---	---	---
0119: Wintermute-----	---	---	---	---
Linoyer-----	4e	5.5	11.0	---
0120: Izamatch-----	---	---	---	---
Armespan-----	---	---	---	---
Cliffdown-----	---	---	---	---
0122: Gravier-----	4e	---	---	---
Izamatch-----	---	---	---	---
0130: Tooele-----	---	---	---	---
Benin-----	4s	---	---	---
0140: Gollaher-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
Belsac-----	---	---	---	---
0151: Hopeka-----	---	---	---	---
Amene-----	---	---	---	---
Rock Outcrop---	---	---	---	---
0154: Hopeka-----	---	---	---	---
Tecomar-----	---	---	---	---
0160: Saltair-----	---	---	---	---
Kawich-----	4s	---	---	---
0161: Saltair-----	---	---	---	---
Playas-----	---	---	---	---
0171: Loray-----	---	---	---	---
Gravier-----	---	---	---	---
Toano-----	---	---	---	---
0173: Cliffdown-----	---	---	---	---
Armespan-----	---	---	---	---
Izamatch-----	---	---	---	---
0174: Wintermute-----	---	---	---	---
Lincyer-----	3e	5.5	11.0	---
Okan-----	---	---	---	---
0175: Loray-----	---	---	---	---
Wintermute-----	---	---	---	---
0176: Loray-----	---	---	---	---
Zerk-----	4e	---	---	---
Zerk-----	4e	---	---	---
0181: Peeko-----	---	---	---	---
Dewar-----	---	---	---	---
Peeko-----	---	---	---	---
0182: Peeko-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
Peeko-----	---	---	---	---
Gance-----	---	---	---	---
0183: Peeko-----	---	---	---	---
Enko-----	4e	---	---	---
Izar-----	---	---	---	---
0185: Peeko-----	---	---	---	---
Chiara-----	---	---	---	---
0186: Palinor-----	---	---	---	---
Pharo-----	---	---	---	---
Hundraw-----	---	---	---	---
0187: Peeko-----	---	---	---	---
Izar-----	---	---	---	---
Izar-----	---	---	---	---
0188: Palinor-----	---	---	---	---
Automal-----	---	---	---	---
Izar-----	---	---	---	---
0192: Hutchley-----	---	---	---	---
Simon-----	---	---	---	---
0201: Tecomar-----	---	---	---	---
Hopeka-----	---	---	---	---
Rock Outcrop---	---	---	---	---
0203: Tecomar-----	---	---	---	---
Pockaloo-----	---	---	---	---
Pharo-----	---	---	---	---
0210: Mazuma-----	2e	---	---	---
Hardhat-----	---	---	---	---
Loray-----	---	---	---	---
0211: Valmy-----	---	---	---	---
Enko-----	2e	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
0230:				
Zafod-----	---	---	---	---
Pyrat-----	---	---	---	---
Palinor-----	---	---	---	---
0231:				
Dacker-----	3e	---	---	---
Nevador-----	---	---	---	---
Kelk-----	---	---	---	---
0240:				
Hundraw-----	---	---	---	---
Cobra-----	---	---	---	---
0241:				
Hundraw-----	---	---	---	---
Peeko-----	---	---	---	---
Kzin-----	---	---	---	---
0242:				
Cobra-----	---	---	---	---
Hundraw-----	---	---	---	---
Chiara-----	---	---	---	---
0244:				
Hundraw-----	---	---	---	---
Shabliss-----	---	---	---	---
Palinor-----	---	---	---	---
0250:				
Izar-----	---	---	---	---
Holborn-----	---	---	---	---
Kzin-----	---	---	---	---
0251:				
Izar-----	---	---	---	---
Palinor-----	---	---	---	---
Shabliss-----	---	---	---	---
0252:				
Izar-----	---	---	---	---
Hundraw-----	---	---	---	---
Okan-----	---	---	---	---
0260:				
Dewar-----	---	---	---	---
Chiara-----	---	---	---	---
Hunnton-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
0270:				
Chiara-----	---	---	---	---
Kelk-----	---	---	---	---
Kelk-----	2s	6.2	14.0	62.0
0273:				
Chiara-----	---	---	---	---
Dewar-----	---	---	---	---
Enko-----	3e	---	---	---
0276:				
Chiara-----	---	---	---	---
Peeko-----	---	---	---	---
Urmafot-----	---	---	---	---
0279:				
Chiara-----	---	---	---	---
Parisa-----	---	---	---	---
Enko-----	2e	---	---	---
0280:				
Oupico-----	4e	---	---	---
Enko-----	3e	---	---	---
0282:				
Shabliss-----	---	---	---	---
Pyrat-----	---	---	---	---
Okan-----	---	---	---	---
0310:				
Sonoma-----	3w	---	---	---
Devilsgait-----	5w	---	---	---
Sonoma-----	3w	---	---	---
0311:				
Sonoma-----	2w	---	---	---
Kelk-----	2s	6.2	14.0	62.0
0330:				
Kzin-----	---	---	---	---
Holborn-----	---	---	---	---
Kzin-----	---	---	---	---
0331:				
Kzin-----	---	---	---	---
Cobre-----	---	---	---	---
Jackpot-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
0333: Kzin-----	---	---	---	---
Holborn-----	---	---	---	---
Onkeyo-----	---	---	---	---
0340: Shuttle-----	4e	---	---	---
Hardhat-----	---	---	---	---
Shuttle-----	4e	---	---	---
0350: Jericho-----	---	---	---	---
Jericho-----	---	---	---	---
0351: Shabliss-----	---	---	---	---
Okan-----	---	---	---	---
Eastwell-----	---	---	---	---
0355: Shabliss-----	---	---	---	---
Okan-----	---	---	---	---
Okan-----	---	---	---	---
0370: Toano-----	---	---	---	---
Tulase-----	2c	6.4	14.0	63.0
0371: Linoyer-----	3e	5.5	11.0	---
Okan-----	---	---	---	---
0373: Timpie-----	4s	6.0	7.0	---
Piltown-----	---	---	---	---
Linoyer-----	2e	6.0	12.0	---
0374: Heist-----	---	---	---	---
Okan-----	---	---	---	---
Zerk-----	4e	---	---	---
0375: Toano-----	---	---	---	---
Heist-----	---	---	---	---
0380: Cobre-----	---	---	---	---
Izar-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
Jackpot-----	---	---	---	---
0381: Cobre-----	---	---	---	---
Hundraw-----	---	---	---	---
Jackpot-----	---	---	---	---
0382: Cobre-----	---	---	---	---
Enko-----	3e	---	---	---
0390: Hardol-----	---	---	---	---
Muiral-----	---	---	---	---
Rubble Land----	---	---	---	---
0392: Hardol-----	---	---	---	---
Muiral-----	---	---	---	---
Onkeyo-----	---	---	---	---
0400: Cleavage-----	---	---	---	---
Cleavage-----	---	---	---	---
Sumine-----	---	---	---	---
410: Jericho-----	---	---	---	---
411: Jericho-----	---	---	---	---
Armespan-----	---	---	---	---
0420: Palinor-----	---	---	---	---
Palinor-----	---	---	---	---
0421: Palinor-----	---	---	---	---
Automal-----	---	---	---	---
0422: Palinor-----	---	---	---	---
Zimbob-----	---	---	---	---
Okan-----	---	---	---	---
0424: Palinor-----	---	---	---	---
Hundraw-----	---	---	---	---
Okan-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
0426: Palinor-----	---	---	---	---
Automal-----	---	---	---	---
Wintermute-----	---	---	---	---
0429: Palinor-----	---	---	---	---
Automal-----	---	---	---	---
Palinor-----	---	---	---	---
0430: Graley-----	---	---	---	---
Ploche-----	---	---	---	---
Cropper-----	---	---	---	---
0431: Graley-----	---	---	---	---
Chen-----	---	---	---	---
McIvey-----	---	---	---	---
0440: Lomoline-----	---	---	---	---
Bijorja-----	---	---	---	---
Lomoline-----	---	---	---	---
0460: Okan-----	---	---	---	---
Automal-----	---	---	---	---
Hundraw-----	---	---	---	---
0470: Rozara-----	---	---	---	---
Cucamungo-----	---	---	---	---
Rock Outcrop----	---	---	---	---
0471: Cucamungo-----	---	---	---	---
Hendap-----	---	---	---	---
Rock Outcrop----	---	---	---	---
0480: Shabliss-----	---	---	---	---
Palinor-----	---	---	---	---
0485: Shabliss-----	---	---	---	---
Parisa-----	---	---	---	---
Hunnton-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
0490:				
Wintermute-----	---	---	---	---
Automal-----	---	---	---	---
0492:				
Wintermute-----	---	---	---	---
Peeko-----	---	---	---	---
Hundraw-----	---	---	---	---
0494:				
Wintermute-----	---	---	---	---
Pyrat-----	---	---	---	---
Automal-----	---	---	---	---
0496:				
Sodhouse-----	---	---	---	---
Sodhouse-----	---	---	---	---
Linoyer-----	---	---	---	---
0497:				
Sodhouse-----	---	---	---	---
Sodhouse-----	---	---	---	---
Palinor-----	---	---	---	---
0501:				
Pharo-----	---	---	---	---
Izar-----	---	---	---	---
Okan-----	---	---	---	---
0503:				
Automal-----	---	---	---	---
Okan-----	---	---	---	---
Wintermute-----	---	---	---	---
0504:				
Automal-----	---	---	---	---
Wintermute-----	---	---	---	---
0510:				
Adobe-----	---	---	---	---
Hardzem-----	---	---	---	---
Haunchee-----	---	---	---	---
0511:				
Adobe-----	---	---	---	---
Wardbay-----	---	---	---	---
Hardol-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
0512:				
Adobe-----	---	---	---	---
Cavehill-----	---	---	---	---
Wardbay-----	---	---	---	---
0520:				
Haunchee-----	---	---	---	---
Muiral-----	---	---	---	---
Wardbay-----	---	---	---	---
0530:				
Wardbay-----	---	---	---	---
Adobe-----	---	---	---	---
Haunchee-----	---	---	---	---
0532:				
Onkeyo-----	---	---	---	---
Pookaloo-----	---	---	---	---
Tecomar-----	---	---	---	---
0540:				
Kunzler-----	2e	4.0	---	---
Sycomat-----	---	---	---	---
0541:				
Kunzler-----	2e	4.0	---	---
Sheffit-----	---	---	---	---
0550:				
Urmafot-----	---	---	---	---
Bobs-----	---	---	---	---
Urmafot-----	---	---	---	---
0551:				
Urmafot-----	---	---	---	---
Bobs-----	---	---	---	---
552:				
Urmafot-----	---	---	---	---
Pharo-----	---	---	---	---
0554:				
Urmafot-----	---	---	---	---
Tecomar-----	---	---	---	---
Urmafot-----	---	---	---	---
0561:				
Palinor-----	---	---	---	---
Urmafot-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
Palinor-----	---	---	---	---
0562: Bobs-----	---	---	---	---
0563: Bobs-----	---	---	---	---
Pyrat-----	---	---	---	---
0575: Pockaloo-----	---	---	---	---
Cavehill-----	---	---	---	---
Rock Outcrop----	---	---	---	---
0576: Pockaloo-----	---	---	---	---
Tecomar-----	---	---	---	---
Onkeyo-----	---	---	---	---
0582: Sheffit-----	---	---	---	---
Sheffit-----	---	---	---	---
Katelana-----	---	---	---	---
0590: Upatad-----	---	---	---	---
Segura-----	---	---	---	---
0600: Onkeyo-----	---	---	---	---
Amene-----	---	---	---	---
Pockaloo-----	---	---	---	---
0610: Wintermute-----	---	---	---	---
Eastwell-----	---	---	---	---
0614: Wintermute-----	---	---	---	---
Eastwell-----	---	---	---	---
Zerk-----	---	---	---	---
0617: Wintermute-----	---	---	---	---
Zerk-----	---	---	---	---
Loray-----	---	---	---	---
0620: Atlow-----	---	---	---	---
Atlow-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
0631:				
Eastwell-----	---	---	---	---
Wintermute-----	---	---	---	---
Okan-----	---	---	---	---
0632:				
Eastwell-----	---	---	---	---
Zafod-----	---	---	---	---
0634:				
Eastwell-----	---	---	---	---
Shabliss-----	---	---	---	---
Izar-----	---	---	---	---
0636:				
Eastwell-----	---	---	---	---
Hundraw-----	---	---	---	---
Okan-----	---	---	---	---
0650:				
Mizpah-----	---	---	---	---
Zerk-----	4e	---	---	---
Wintermute-----	---	---	---	---
0671:				
Idway-----	---	---	---	---
Mysol-----	---	---	---	---
0672:				
Idway-----	---	---	---	---
James Canyon----	2w	---	9.0	---
0680:				
Simon-----	---	---	---	---
Graley-----	---	---	---	---
Chen-----	---	---	---	---
0691:				
Tarnach-----	---	---	---	---
Tarnach-----	---	---	---	---
Wesfil-----	---	---	---	---
0692:				
Tarnach-----	---	---	---	---
Upatad-----	---	---	---	---
Wesfil-----	---	---	---	---
0700:				
Shabliss-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
		Tons	AUM	Bu
Tulase-----	3e	6.2	14.0	62.0
Linoyer-----	4e	5.5	11.0	---
0720:				
Mysol-----	---	---	---	---
Mysol-----	---	---	---	---
0730:				
Idway-----	---	---	---	---
Kawich-----	---	---	---	---
Mysol-----	---	---	---	---
0733:				
Idway-----	---	---	---	---
Idway-----	---	---	---	---
Mysol-----	---	---	---	---
0740:				
Upatad-----	---	---	---	---
Picche-----	---	---	---	---
Tarnach-----	---	---	---	---
0760:				
Playas-----	---	---	---	---
0761:				
Umberland-----	---	---	---	---
Umberland-----	---	---	---	---
0762:				
Umberland-----	---	---	---	---
Playas-----	---	---	---	---
0763:				
Equis-----	---	---	---	---
Umberland-----	---	---	---	---
Duffer-----	4w	---	---	---
0764:				
Umberland-----	---	---	---	---
Rubylake-----	5w	---	---	---
Orupa-----	3e	---	---	---
0765:				
Umberland-----	---	---	---	---
Umberland-----	---	---	---	---
Wendane-----	6w	---	---	---
0767:				
Umberland-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
Umberland-----	---	---	---	---
Orupa-----	3e	---	---	---
0781: Mysol-----	---	---	---	---
Benin-----	4s	---	---	---
Wendane-----	6w	---	---	---
0800: Mazuma-----	2c	---	---	---
Toano-----	---	---	---	---
0801: Mazuma-----	2e	---	---	---
Zerk-----	4s	---	---	---
Okan-----	---	---	---	---
0804: Mazuma-----	2e	---	---	---
Kawich-----	---	---	---	---
Playas-----	---	---	---	---
0807: Mazuma-----	2c	---	---	---
Kunzler-----	2c	4.0	---	---
Zerk-----	4s	---	---	---
0823: Kunzler-----	2e	4.0	---	---
Pyrat-----	---	---	---	---
Blimo-----	---	---	---	---
0824: Kunzler-----	2c	4.0	---	---
Katelana-----	---	---	---	---
0827: Kunzler-----	2c	4.0	---	---
James Canyon----	3w	---	9.0	---
James Canyon----	2w	---	---	---
0828: Kunzler-----	2e	4.0	---	---
Pyrat-----	---	---	---	---
Wendane-----	6w	---	---	---
0830: Pharo-----	---	---	---	---
Kzin-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
Pharo-----	---	---	---	---
0842: Katelana-----	---	---	---	---
Timpie-----	4s	6.0	7.0	---
0843: Katelana-----	---	---	---	---
Kawich-----	4s	---	---	---
0845: Katelana-----	---	---	---	---
Ragtown-----	---	---	---	---
Timpie-----	4s	6.0	7.0	---
0847: Mazuma-----	2c	---	---	---
Blimo-----	---	---	---	---
Wintermute-----	---	---	---	---
0850: Palinor-----	---	---	---	---
Wintermute-----	---	---	---	---
Okan-----	---	---	---	---
0851: Palinor-----	---	---	---	---
Zimbob-----	---	---	---	---
Tecomar-----	---	---	---	---
0852: Palinor-----	---	---	---	---
Pyrat-----	---	---	---	---
Shabliss-----	---	---	---	---
0854: Palinor-----	---	---	---	---
Automal-----	---	---	---	---
Shabliss-----	---	---	---	---
0856: Palinor-----	---	---	---	---
Parisa-----	---	---	---	---
0857: Palinor-----	---	---	---	---
Shabliss-----	---	---	---	---
Linoyer-----	2e	6.0	12.0	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
0858:				
Palinor-----	---	---	---	---
Automal-----	---	---	---	---
Linoyer-----	2e	6.0	12.0	---
0870:				
Theriot-----	---	---	---	---
Zimbob-----	---	---	---	---
0880:				
Duffer-----	4w	---	---	---
Duffer-----	4w	---	---	---
Kolda-----	6w	---	10.0	---
0881:				
Duffer-----	4w	---	---	---
Kunzler-----	2e	4.0	---	---
0882:				
Duffer-----	4w	---	---	---
Kolda-----	6w	---	10.0	---
0894:				
Zerk-----	4e	---	---	---
Threesee-----	---	---	---	---
Mazuma-----	2c	---	---	---
0900:				
Zerk-----	---	---	---	---
Automal-----	---	---	---	---
Linoyer-----	2e	6.0	12.0	---
0910:				
Ragtown-----	---	---	---	---
Ragtown-----	---	---	---	---
0912:				
Katelana-----	---	---	---	---
Katelana-----	---	---	---	---
0914:				
Katelana-----	---	---	---	---
Benin-----	4s	---	---	---
Sheffit-----	---	---	---	---
0917:				
Katelana-----	---	---	---	---
Sheffit-----	---	---	---	---
Ragtown-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
0918:				
Katelana-----	---	---	---	---
Zorravista-----	---	---	---	---
Playas-----	---	---	---	---
0930:				
Okan-----	---	---	---	---
Toano-----	---	---	---	---
Loray-----	---	---	---	---
0932:				
Okan-----	---	---	---	---
Pyrat-----	---	---	---	---
0941:				
Sheffit-----	---	---	---	---
Sheffit-----	---	---	---	---
Zorravista-----	---	---	---	---
0943:				
Sheffit-----	---	---	---	---
Umberland-----	---	---	---	---
0960:				
Gravier-----	4e	---	---	---
Zerk-----	4e	---	---	---
0961:				
Gravier-----	---	---	---	---
Pilttdown-----	---	---	---	---
Zerk-----	4s	---	---	---
0972:				
Zimbob-----	---	---	---	---
Zimbob-----	---	---	---	---
Pookaloo-----	---	---	---	---
0974:				
Zimbob-----	---	---	---	---
Tecomar-----	---	---	---	---
Pookaloo-----	---	---	---	---
0975:				
Zimbob-----	---	---	---	---
Tecomar-----	---	---	---	---
Tecomar-----	---	---	---	---
0980:				
Onkeyo-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
Pookaloo-----	---	---	---	---
Zimbob-----	---	---	---	---
0990: Hyzen-----	---	---	---	---
Zimbob-----	---	---	---	---
0991: Hyzen-----	---	---	---	---
Cavehill-----	---	---	---	---
Tecomar-----	---	---	---	---
1000: Pyrat-----	---	---	---	---
Zerk-----	4e	---	---	---
1001: Pyrat-----	---	---	---	---
Okan-----	---	---	---	---
Eastwell-----	---	---	---	---
1002: Threesee-----	---	---	---	---
Kunzler-----	2e	4.0	---	---
Threesee-----	---	---	---	---
1003: Pyrat-----	---	---	---	---
Hundraw-----	---	---	---	---
Tulase-----	3e	6.2	14.0	62.0
1004: Pyrat-----	---	---	---	---
Parisa-----	---	---	---	---
Tulase-----	2e	6.4	14.0	63.0
1005: Pyrat-----	---	---	---	---
Zerk-----	---	---	---	---
Parisa-----	---	---	---	---
1006: Pyrat-----	---	---	---	---
Blimo-----	---	---	---	---
1007: Pyrat-----	---	---	---	---
Parisa-----	---	---	---	---
Automal-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
1009: Pyrat-----	---	---	---	---
Tulase-----	3a	6.2	14.0	62.0
Wintermute-----	---	---	---	---
1020: Okan-----	---	---	---	---
Eastwell-----	---	---	---	---
Blimo-----	---	---	---	---
1023: Okan-----	---	---	---	---
Okan-----	---	---	---	---
Katelana-----	---	---	---	---
1030: Segura-----	---	---	---	---
Bullump-----	---	---	---	---
Hutchley-----	---	---	---	---
1040: Segura-----	---	---	---	---
Picche-----	---	---	---	---
Chen-----	---	---	---	---
1061: Picche-----	---	---	---	---
Cucamungo-----	---	---	---	---
Rock Outcrop---	---	---	---	---
1070: Zafod-----	---	---	---	---
Automal-----	---	---	---	---
Okan-----	---	---	---	---
1080: Cotant-----	---	---	---	---
Segura-----	---	---	---	---
1111: Parisa-----	---	---	---	---
1120: Okan-----	---	---	---	---
Automal-----	---	---	---	---
1150: Adobe-----	---	---	---	---
Wardbay-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
Haunchee-----	---	---	---	---
1161: Pharo-----	---	---	---	---
Bobs-----	---	---	---	---
Pookaloo-----	---	---	---	---
1171: Pyrat-----	---	---	---	---
Automal-----	---	---	---	---
Gravier-----	4a	---	---	---
1172: Pyrat-----	---	---	---	---
Automal-----	---	---	---	---
Automal-----	---	---	---	---
1173: Pyrat-----	---	---	---	---
Automal-----	---	---	---	---
1174: Pyrat-----	---	---	---	---
Tosser-----	---	---	---	---
1180: Haunchee-----	---	---	---	---
Cavehill-----	---	---	---	---
1181: Haunchee-----	---	---	---	---
Halacan-----	---	---	---	---
Wardbay-----	---	---	---	---
1190: Upatad-----	---	---	---	---
Atlow-----	---	---	---	---
Upatad-----	---	---	---	---
1191: Upatad-----	---	---	---	---
Pioche-----	---	---	---	---
Rock Outcrop---	---	---	---	---
1200: Hardol-----	---	---	---	---
Hardzem-----	---	---	---	---
Rock Outcrop---	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
1201: Hardol-----	---	---	---	---
Rock Outcrop----	---	---	---	---
Wardbay-----	---	---	---	---
1210: Blimo-----	---	---	---	---
Kunzler-----	2c	4.0	---	---
Linoyer-----	3e	5.5	11.0	---
1213: Blimo-----	---	---	---	---
Threesee-----	---	---	---	---
1215: Blimo-----	---	---	---	---
Zorravista-----	---	---	---	---
1216: Blimo-----	---	---	---	---
Idway-----	---	---	---	---
Mazuma-----	2c	---	---	---
1220: Onkeyo-----	---	---	---	---
Adobe-----	---	---	---	---
Pookaloo-----	---	---	---	---
1230: Hardzem-----	---	---	---	---
Haunchee-----	---	---	---	---
Wardbay-----	---	---	---	---
1240: Benin-----	4s	---	---	---
Benin-----	4s	---	---	---
1241: Benin-----	4s	---	---	---
Playas-----	---	---	---	---
Benin-----	4s	---	---	---
1250: Tecomar-----	---	---	---	---
Pookaloo-----	---	---	---	---
1270: Katelana-----	---	---	---	---
Sheffit-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
1271: Uvada-----	---	---	---	---
Ragtown-----	---	---	---	---
1272: Katelana-----	---	---	---	---
Kawich-----	4s	---	---	---
1280: Sycomat-----	---	---	---	---
Kunzler-----	2e	4.0	---	---
1281: Sycomat-----	---	---	---	---
Mazuma-----	2c	---	---	---
1290: Heist-----	---	---	---	---
Blimo-----	---	---	---	---
1300: Cavehill-----	---	---	---	---
Haunchee-----	---	---	---	---
Hardzem-----	---	---	---	---
1360: Toba-----	5w	---	---	---
Appian-----	3s	---	---	---
1370: Orupa-----	2c	---	---	---
Playas-----	---	---	---	---
Boofuss-----	---	---	---	---
1380: Hulderman-----	---	---	---	---
Toba-----	5w	---	---	---
Benin-----	4s	---	---	---
1390: Wendana-----	6w	---	---	---
Mysol-----	---	---	---	---
Toba-----	5w	---	---	---
1410: Threesee-----	---	---	---	---
Tosser-----	---	---	---	---
1411: Threesee-----	---	---	---	---
Linoyer-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
Okan-----	---	---	---	---
1412: Threesee-----	---	---	---	---
Idway-----	---	---	---	---
1413: Idway-----	---	---	---	---
Zorravista-----	---	---	---	---
Kunzler-----	2c	4.0	---	---
1414: Threesee-----	---	---	---	---
Shantown-----	6s	---	---	---
Kunzler-----	2e	4.0	---	---
1430: Pookaloo-----	---	---	---	---
Tecomar-----	---	---	---	---
Rock Outcrop----	---	---	---	---
1440: Boofuss-----	---	---	---	---
Boofuss-----	---	---	---	---
Equis-----	---	---	---	---
1441: Boofuss-----	---	---	---	---
Wendane-----	6w	---	---	---
Umberland-----	---	---	---	---
1450: Piltown-----	---	---	---	---
Kawich-----	4s	---	---	---
1460: Tosser-----	---	---	---	---
Threesee-----	---	---	---	---
1471: Timpie-----	4s	6.0	7.0	---
Kunzler-----	2c	4.0	---	---
Threesee-----	---	---	---	---
1480: Tulase-----	2e	6.4	14.0	63.0
Linoyer-----	3e	5.5	11.0	---
1500: Tocole-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
Loray-----	---	---	---	---
1510: Izamatch-----	---	---	---	---
Cliffdown-----	---	---	---	---
1520: Izamatch-----	---	---	---	---
Izamatch-----	---	---	---	---
Luning-----	4s	---	---	---
1521: Izamatch-----	---	---	---	---
Izamatch-----	---	---	---	---
Theriot-----	---	---	---	---
1522: Izamatch-----	---	---	---	---
Smaug-----	---	---	---	---
Badland-----	---	---	---	---
1530: Theriot-----	---	---	---	---
Theriot-----	---	---	---	---
Izamatch-----	---	---	---	---
1531: Theriot-----	---	---	---	---
Izamatch-----	---	---	---	---
Rock Outcrop----	---	---	---	---
1532: Theriot-----	---	---	---	---
Theriot-----	---	---	---	---
Rock Outcrop----	---	---	---	---
1540: Kyler-----	---	---	---	---
Amtoft-----	---	---	---	---
Amtoft-----	---	---	---	---
1541: Kyler-----	---	---	---	---
Kyler-----	---	---	---	---
Rock Outcrop----	---	---	---	---
1542: Kyler-----	---	---	---	---
Amtoft-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
Jericho-----	---	---	---	---
1550: Jericho-----	---	---	---	---
Jericho-----	---	---	---	---
1560: Toano-----	---	---	---	---
Timpie-----	4s	6.0	7.0	---
1570: Jericho-----	---	---	---	---
Xeric Torriorthents--	---	---	---	---
1580: Armespan-----	---	---	---	---
Jericho-----	---	---	---	---
1581: Armespan-----	---	---	---	---
Kyler-----	---	---	---	---
Heist-----	---	---	---	---
1582: Armespan-----	---	---	---	---
Xeric Torriorthents--	---	---	---	---
1590: Luning-----	---	---	---	---
Luning-----	4s	---	---	---
Loray-----	---	---	---	---
1591: Luning-----	---	---	---	---
Izamatch-----	---	---	---	---
Badland-----	---	---	---	---
1600: Eaglepass-----	---	---	---	---
Antoft-----	---	---	---	---
1610: Xeric Torriorthents--	---	---	---	---
Armespan-----	---	---	---	---
Badland-----	---	---	---	---
1620: Kolda-----	---	---	---	---
Duffer-----	4w	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
Sonoma-----	3w	---	---	---
1621: Kolda-----	---	---	---	---
Rubylake-----	---	---	---	---
Kolda-----	---	---	---	---
1622: Kolda-----	---	---	---	---
1623: Kolda-----	---	---	---	---
Water-----	---	---	---	---
1630: Pookaloo-----	---	---	---	---
Cavehill-----	---	---	---	---
Rock Outcrop---	---	---	---	---
1631: Pookaloo-----	---	---	---	---
Tecomar-----	---	---	---	---
Wardbay-----	---	---	---	---
1640: Jungo-----	---	---	---	---
Jungo-----	---	---	---	---
1650: Shantown-----	6e	---	---	---
Zorravista-----	---	---	---	---
1651: Shantown-----	6e	---	---	---
Shantown-----	6e	---	---	---
1660: Wendane-----	6w	---	---	---
Logan-----	5w	---	---	---
1670: Wendane-----	6w	---	---	---
Logan-----	5w	---	---	---
Wendane-----	6w	---	---	---
1680: Rubylake-----	---	---	---	---
Kolda-----	---	---	---	---
Wendane-----	6w	---	---	---
1681: Wendane-----	6w	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
Logan-----	5w	---	---	---
Umberland-----	---	---	---	---
1690: Krenka-----	4e	---	---	---
Secrepass-----	4e	---	---	---
1700: Heechee-----	4s	---	---	---
Rubicity-----	4e	---	---	---
Heechee-----	---	---	---	---
1702: Heechee-----	4s	---	---	---
McIvey-----	---	---	---	---
Rubicity-----	3e	---	---	---
1710: James Canyon----	3w	---	---	---
Wendane-----	6w	---	---	---
1711: James Canyon----	3w	---	---	---
Wendane-----	6w	---	---	---
Wendane-----	6w	---	---	---
1720: Welch-----	---	---	---	---
1721: Welch-----	---	---	---	---
Welsum-----	5w	---	---	---
1722: Welch-----	3w	---	---	---
Slipback-----	---	---	---	---
Welch-----	5w	---	5.0	---
1723: Welch-----	---	---	---	---
Welch-----	---	---	---	---
1730: McIvey-----	---	---	---	---
Donna-----	---	---	---	---
1731: McIvey-----	---	---	---	---
Chen-----	---	---	---	---
Donna-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
1732:				
McIvey-----	---	---	---	---
Stampede-----	4e	---	---	---
Heechee-----	4s	---	---	---
1740:				
Slipback-----	---	---	---	---
Welch-----	3w	---	---	---
1741:				
Slipback-----	---	---	---	---
Shantown-----	6s	---	---	---
Toba-----	5w	---	---	---
1750:				
Heechee-----	4e	---	---	---
Welch-----	---	---	---	---
Welch-----	---	---	---	---
1760:				
Lykal-----	---	---	---	---
Wendane-----	6w	---	---	---
James Canyon---	3w	---	---	---
1770:				
Donna-----	---	---	---	---
McIvey-----	---	---	---	---
Heechee-----	---	---	---	---
1780:				
Schoer-----	3e	---	---	---
Welch-----	---	---	---	---
1790:				
Donna-----	---	---	---	---
Krenka-----	---	---	---	---
McIvey-----	---	---	---	---
1800:				
Chen-----	---	---	---	---
Graley-----	---	---	---	---
Rock Outcrop---	---	---	---	---
1810:				
Sumine-----	---	---	---	---
Tusel-----	---	---	---	---
Hapgood-----	---	---	---	---

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land Capability	Alfalfa hay	Pasture	Wheat
			AUM	
1820: Hussa-----	5w	---	5.0	---
Halleck-----	5w	---	---	---
Welsun-----	5w	---	---	---
1831: Enko-----	3e	---	---	---
Kalk-----	---	---	---	---
Enko-----	2s	---	---	---
1840: Amene-----	---	---	---	---
Belsac-----	---	---	---	---
Chen-----	---	---	---	---
1850: Bullump-----	---	---	---	---
Cleavage-----	---	---	---	---
Rock Outcrop---	---	---	---	---
1861: Equis-----	---	---	---	---
Devilsgait-----	5w	---	---	---
1862: Equis-----	---	---	---	---
Equis-----	---	---	---	---
Kolda-----	6w	---	10.0	---
1870: Denied Access---	---	---	---	---
1880: Water-----	---	---	---	---

TABLE 6--SUITABILITY FOR RANGELAND SEEDING

Soil name and map symbol	Limitation rating	Restrictive features
053:		
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
Urmafot-----	Poorly suited-----	Droughty, small stones.
062:		
Amtoft-----	Poorly suited-----	Too arid, droughty, small stones.
Rock Outcrop-----	Not rated-----	
Amtoft-----	Poorly suited-----	Too arid, droughty, small stones.
066:		
Zimbob-----	Poorly suited-----	Droughty, small stones.
Zimbob-----	Poorly suited-----	Too arid, droughty, small stones.
067:		
Tacomar-----	Poorly suited-----	Droughty, small stones.
Tacomar-----	Poorly suited-----	Droughty, small stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
069:		
Zimbob-----	Poorly suited-----	Droughty, small stones.
Hyzen-----	Poorly suited-----	Too arid, droughty, large stones.
Rock Outcrop-----	Not rated-----	
070:		
Stewval-----	Poorly suited-----	Too arid, droughty, small stones.
Eastwell-----	Poorly suited-----	Too arid, droughty, excess sodium.
071:		
Stewval-----	Poorly suited-----	Too arid, droughty, small stones.
Wesfil-----	Poorly suited-----	Too arid, droughty, small stones.
Rock Outcrop-----	Not rated-----	
080:		
Stewval-----	Poorly suited-----	Too arid, droughty, small stones.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
092:		
Wesfil-----	Poorly suited-----	Too arid, droughty, small stones.
Wintermute-----	Poorly suited-----	Too arid.
Okan-----	Suited-----	Too arid, droughty.
098:		
Wesfil-----	Poorly suited-----	Too arid, droughty, small stones.
Tarnach-----	Poorly suited-----	Droughty, small stones.
Wesfil-----	Poorly suited-----	Too arid, droughty, small stones.
099:		
Wesfil-----	Poorly suited-----	Too arid, droughty, small stones.
Armespan-----	Poorly suited-----	Small stones, excess salt.
Heist-----	Suited-----	Too arid, excess salt, excess sodium.
100:		
Benin-----	Poorly suited-----	Too arid, rooting depth, excess salt.
Mazuma-----	Poorly suited-----	Too arid, excess salt, excess sodium.
101:		
Toano-----	Poorly suited-----	Too arid.
Linoyer-----	Suited-----	Too arid.
103:		
Benin-----	Poorly suited-----	Too arid, rooting depth, excess salt.
Playas-----	Poorly suited-----	Too arid, droughty, rooting depth.
111:		
Gravier-----	Poorly suited-----	Too arid, droughty, small stones.
Armespan-----	Poorly suited-----	Small stones, excess salt.
113:		
Gravier-----	Poorly suited-----	Too arid, droughty, small stones.
Gravier-----	Poorly suited-----	Too arid, small stones, excess salt.
Jericho-----	Poorly suited-----	Droughty, small stones.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
116:		
Gravier-----	Poorly suited-----	Too arid, small stones, excess salt.
Izamatch-----	Poorly suited-----	Too arid, droughty.
Loray-----	Poorly suited-----	Too arid.
118:		
Gravier-----	Poorly suited-----	Too arid, droughty, small stones.
Automal-----	Suited-----	Too arid, droughty.
Zerk-----	Poorly suited-----	Too arid.
119:		
Wintermute-----	Poorly suited-----	Too arid.
Linoyer-----	Suited-----	Too arid.
120:		
Izamatch-----	Poorly suited-----	Too arid, droughty, small stones.
Armespan-----	Poorly suited-----	Small stones, excess salt.
Cliffdown-----	Poorly suited-----	Too arid, droughty, small stones.
122:		
Gravier-----	Poorly suited-----	Too arid, small stones, excess salt.
Izamatch-----	Poorly suited-----	Too arid, droughty, small stones.
130:		
Tocele-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Benin-----	Poorly suited-----	Too arid, rooting depth, excess salt.
140:		
Gollaher-----	Poorly suited-----	Too arid, droughty, small stones.
Belsac-----	Poorly suited-----	Small stones.
151:		
Hopeka-----	Poorly suited-----	Too arid, droughty, small stones.
Amene-----	Poorly suited-----	Droughty, small stones.
Rock Outcrop-----	Not rated-----	

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
154:		
Hopeka-----	Poorly suited-----	Too arid, droughty, small stones.
Tecomar-----	Poorly suited-----	Droughty, small stones.
160:		
Saltair-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Kawich-----	Poorly suited-----	Too arid, droughty, too sandy.
161:		
Saltair-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Playas-----	Poorly suited-----	Too arid, droughty, excess salt.
171:		
Loray-----	Poorly suited-----	Too arid.
Gravier-----	Poorly suited-----	Too arid, droughty, small stones.
Toano-----	Poorly suited-----	Too arid.
173:		
Cliffdown-----	Poorly suited-----	Too arid, droughty, small stones.
Armespan-----	Poorly suited-----	Small stones, excess salt.
Izamatch-----	Poorly suited-----	Too arid, droughty, small stones.
174:		
Wintermute-----	Poorly suited-----	Too arid.
Linoyer-----	Suited-----	Too arid.
Okan-----	Suited-----	Too arid, droughty.
175:		
Loray-----	Poorly suited-----	Too arid.
Wintermute-----	Poorly suited-----	Too arid.
176:		
Loray-----	Poorly suited-----	Too arid.
Zerk-----	Poorly suited-----	Too arid.
Zerk-----	Poorly suited-----	Too arid.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
181:		
Peeko-----	Poorly suited-----	Too arid, droughty.
Dewar-----	Suited-----	Too arid, droughty, cemented pan.
Peeko-----	Poorly suited-----	Too arid, droughty.
182:		
Peeko-----	Poorly suited-----	Too arid, droughty.
Peeko-----	Poorly suited-----	Too arid, droughty.
Gance-----	Poorly suited-----	Small stones, rooting depth.
183:		
Peeko-----	Poorly suited-----	Too arid, droughty.
Enko-----	Poorly suited-----	Excess salt.
Izar-----	Poorly suited-----	Too arid, droughty, small stones.
185:		
Peeko-----	Poorly suited-----	Too arid, droughty.
Peeko-----	Poorly suited-----	Too arid, droughty.
Chiara-----	Poorly suited-----	Too arid, droughty, excess sodium.
186:		
Palinor-----	Poorly suited-----	Too arid, droughty.
Pharo-----	Suited-----	Too arid, droughty.
Hundraw-----	Poorly suited-----	Too arid, droughty, depth to rock.
187:		
Peeko-----	Poorly suited-----	Too arid, droughty.
Izar-----	Poorly suited-----	Too arid, droughty, small stones.
Izar-----	Poorly suited-----	Too arid, droughty, small stones.
188:		
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
Automal-----	Suited-----	Too arid, droughty.
Izar-----	Poorly suited-----	Too arid, droughty, small stones.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
192:		
Hutchley-----	Poorly suited-----	Too arid, droughty, small stones.
Simon-----	Suited-----	Too arid.
201:		
Tecomar-----	Poorly suited-----	Droughty, small stones.
Hopeka-----	Poorly suited-----	Too arid, droughty, small stones.
Rock Outcrop-----	Not rated-----	
203:		
Tecomar-----	Poorly suited-----	Droughty, small stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
Pharo-----	Suited-----	Too arid, droughty.
210:		
Mazuma-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Hardhat-----	Poorly suited-----	Too arid.
Loray-----	Poorly suited-----	Too arid.
211:		
Valmy-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Enko-----	Poorly suited-----	Excess salt.
230:		
Zafod-----	Poorly suited-----	Droughty, large stones.
Pyrat-----	Poorly suited-----	Droughty, small stones.
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
231:		
Dacker-----	Suited-----	Too arid, droughty, excess salt.
Nevador-----	Poorly suited-----	Rooting depth.
Kelk-----	Suited-----	Too arid, excess salt.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
240:		
Hundraw-----	Poorly suited-----	Too arid, droughty, depth to rock.
Cobre-----	Suited-----	Too arid.
241:		
Hundraw-----	Poorly suited-----	Too arid, droughty, depth to rock.
Peeko-----	Poorly suited-----	Too arid, droughty.
Kzin-----	Poorly suited-----	Droughty, small stones, depth to rock.
242:		
Cobre-----	Suited-----	Too arid.
Hundraw-----	Poorly suited-----	Too arid, droughty, depth to rock.
Chiara-----	Poorly suited-----	Too arid, droughty, excess sodium.
244:		
Hundraw-----	Poorly suited-----	Too arid, droughty, depth to rock.
Shabliss-----	Poorly suited-----	Droughty.
Palinor-----	Poorly suited-----	Too arid, droughty.
250:		
Izar-----	Poorly suited-----	Too arid, droughty, small stones.
Holborn-----	Poorly suited-----	Droughty, depth to rock.
Kzin-----	Poorly suited-----	Droughty, small stones, depth to rock.
251:		
Izar-----	Poorly suited-----	Too arid, droughty, small stones.
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
Shabliss-----	Poorly suited-----	Droughty.
252:		
Izar-----	Poorly suited-----	Too arid, droughty, small stones.
Hundraw-----	Poorly suited-----	Too arid, droughty, depth to rock.
Okan-----	Suited-----	Too arid, droughty.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
260:		
Dewar-----	Suited-----	Too arid, droughty, cemented pan.
Chiara-----	Poorly suited-----	Too arid, droughty, excess sodium.
Hunnton-----	Suited-----	Too arid, droughty, excess salt.
270:		
Chiara-----	Poorly suited-----	Too arid, droughty, excess sodium.
Kelk-----	Suited-----	Too arid, excess salt.
Kelk-----	Suited-----	Too arid, excess salt.
273:		
Chiara-----	Poorly suited-----	Too arid, droughty, excess sodium.
Dewar-----	Suited-----	Too arid, droughty, cemented pan.
Enko-----	Poorly suited-----	Excess salt.
276:		
Chiara-----	Poorly suited-----	Too arid, droughty, excess sodium.
Peeko-----	Poorly suited-----	Too arid, droughty.
Urmafot-----	Poorly suited-----	Droughty.
279:		
Chiara-----	Poorly suited-----	Too arid, droughty, excess sodium.
Parisa-----	Suited-----	Too arid, droughty, excess sodium.
Enko-----	Suited-----	Too arid, excess salt, excess sodium.
280:		
Oupico-----	Poorly suited-----	Too arid.
Enko-----	Suited-----	Too arid.
282:		
Shabliss-----	Poorly suited-----	Droughty.
Fyrat-----	Suited-----	Too arid, droughty, excess salt.
Okan-----	Suited-----	Too arid, droughty.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
310:		
Sonoma-----	Suited-----	Excess salt, excess sodium.
Devilsgait-----	Well suited-----	
Sonoma-----	Poorly suited-----	Excess salt.
311:		
Sonoma-----	Suited-----	Excess salt, excess sodium.
Kelk-----	Suited-----	Too arid, excess salt.
330:		
Kzin-----	Poorly suited-----	Droughty, small stones, depth to rock.
Holborn-----	Poorly suited-----	Droughty, depth to rock.
Kzin-----	Poorly suited-----	Droughty, small stones, depth to rock.
331:		
Kzin-----	Poorly suited-----	Droughty, small stones, depth to rock.
Cobre-----	Suited-----	Too arid.
Jackpot-----	Suited-----	Too arid, depth to rock.
333:		
Kzin-----	Poorly suited-----	Droughty, small stones, depth to rock.
Holborn-----	Poorly suited-----	Droughty, depth to rock.
Onkeyo-----	Poorly suited-----	Droughty, small stones.
340:		
Shuttle-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Hardhat-----	Poorly suited-----	Too arid.
Shuttle-----	Poorly suited-----	Too arid, excess salt, excess sodium.
350:		
Jericho-----	Poorly suited-----	Droughty, small stones.
Jericho-----	Poorly suited-----	Droughty.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
351:		
Shabliss-----	Poorly suited-----	Droughty.
Okan-----	Suited-----	Too arid, droughty.
Eastwell-----	Poorly suited-----	Too arid, droughty, excess sodium.
355:		
Shabliss-----	Poorly suited-----	Droughty.
Okan-----	Suited-----	Too arid, droughty.
Okan-----	Suited-----	Too arid, droughty.
370:		
Toano-----	Poorly suited-----	Too arid.
Tulase-----	Suited-----	Too arid.
371:		
Linoyer-----	Suited-----	Too arid.
Okan-----	Suited-----	Too arid, droughty.
373:		
Timpis-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Piltown-----	Poorly suited-----	Too arid.
Linoyer-----	Suited-----	Too arid.
374:		
Heist-----	Suited-----	Too arid, excess salt, excess sodium.
Okan-----	Suited-----	Too arid, droughty.
Zerk-----	Poorly suited-----	Too arid.
375:		
Toano-----	Poorly suited-----	Too arid.
Heist-----	Suited-----	Too arid, excess salt, excess sodium.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
380:		
Cobre-----	Suited-----	Too arid.
Izar-----	Poorly suited-----	Too arid, droughty, small stones.
Jackpot-----	Suited-----	Too arid, depth to rock.
381:		
Cobre-----	Suited-----	Too arid.
Hundraw-----	Poorly suited-----	Too arid, droughty, depth to rock.
Jackpot-----	Suited-----	Too arid, depth to rock.
382:		
Cobre-----	Suited-----	Too arid.
Enko-----	Poorly suited-----	Excess salt.
390:		
Hardol-----	Poorly suited-----	Small stones, erodes easily.
Muiral-----	Suited-----	Droughty.
Rubble Land-----	Poorly suited-----	Too arid, droughty, large stones.
392:		
Hardol-----	Poorly suited-----	Small stones, erodes easily.
Muiral-----	Suited-----	Droughty.
Onkeyo-----	Poorly suited-----	Droughty, small stones.
400:		
Cleavage-----	Poorly suited-----	Too arid, droughty, small stones.
Cleavage-----	Poorly suited-----	Too arid, droughty, small stones.
Sumine-----	Poorly suited-----	Droughty, small stones.
410:		
Jericho-----	Poorly suited-----	Droughty, small stones.
411:		
Jericho-----	Poorly suited-----	Droughty, small stones.
Armespan-----	Poorly suited-----	Small stones, excess salt.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
420:		
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
421:		
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
Automal-----	Suited-----	Too arid, droughty.
422:		
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
Zimbov-----	Poorly suited-----	Droughty, small stones.
Okan-----	Suited-----	Too arid, droughty.
424:		
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
Hundraw-----	Poorly suited-----	Too arid, droughty, depth to rock.
Okan-----	Suited-----	Too arid, droughty.
426:		
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
Automal-----	Suited-----	Too arid, droughty.
Wintermute-----	Poorly suited-----	Too arid.
429:		
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
Automal-----	Suited-----	Too arid, droughty.
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
430:		
Graley-----	Poorly suited-----	Droughty, small stones, rooting depth.
Pioche-----	Poorly suited-----	Droughty, small stones, rooting depth.
Cropper-----	Poorly suited-----	Droughty, small stones.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
431:		
Graley-----	Poorly suited-----	Droughty, rooting depth.
Chen-----	Poorly suited-----	Too arid, droughty, small stones.
McIvey-----	Poorly suited-----	Small stones.
440:		
Lemoine-----	Poorly suited-----	Too arid, droughty, small stones.
Bijorja-----	Poorly suited-----	Too arid, droughty.
Lemoine-----	Poorly suited-----	Too arid, droughty, small stones.
460:		
Okan-----	Suited-----	Too arid, droughty.
Automal-----	Suited-----	Too arid, droughty.
Hundraw-----	Poorly suited-----	Too arid, droughty, depth to rock.
470:		
Rozara-----	Poorly suited-----	Droughty, small stones.
Cucamungo-----	Poorly suited-----	Droughty, small stones.
Rock Outcrop-----	Not rated-----	
471:		
Cucamungo-----	Poorly suited-----	Droughty, small stones.
Hendap-----	Poorly suited-----	Droughty, small stones.
Rock Outcrop-----	Not rated-----	
480:		
Shabliss-----	Poorly suited-----	Droughty.
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
485:		
Shabliss-----	Poorly suited-----	Droughty.
Parisa-----	Suited-----	Too arid, droughty, excess sodium.
Hunnton-----	Suited-----	Too arid, droughty, excess salt.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
490:		
Wintermute-----	Poorly suited-----	Too arid.
Automal-----	Suited-----	Too arid, droughty.
492:		
Wintermute-----	Poorly suited-----	Too arid.
Peeko-----	Poorly suited-----	Too arid, droughty.
Hundraw-----	Poorly suited-----	Too arid, droughty, depth to rock.
494:		
Wintermute-----	Poorly suited-----	Too arid.
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Automal-----	Suited-----	Too arid, droughty.
496:		
Sodhouse-----	Poorly suited-----	Too arid, droughty.
Sodhouse-----	Poorly suited-----	Too arid, droughty.
Linoyer-----	Suited-----	Too arid, droughty.
497:		
Sodhouse-----	Poorly suited-----	Too arid, droughty.
Sodhouse-----	Poorly suited-----	Too arid, droughty.
Palinor-----	Poorly suited-----	Too arid, droughty.
501:		
Pharo-----	Suited-----	Too arid, droughty.
Izar-----	Poorly suited-----	Too arid, droughty, small stones.
Okan-----	Suited-----	Too arid, droughty.
503:		
Automal-----	Suited-----	Too arid, droughty.
Okan-----	Suited-----	Too arid, droughty.
Wintermute-----	Poorly suited-----	Too arid.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
504:		
Automal-----	Suited-----	Too arid, droughty.
Wintermute-----	Poorly suited-----	Too arid.
510:		
Adobe-----	Poorly suited-----	Too arid, droughty, small stones.
Hardzem-----	Poorly suited-----	Droughty.
Haunchee-----	Poorly suited-----	Droughty, small stones.
511:		
Adobe-----	Poorly suited-----	Too arid, droughty, small stones.
Wardbay-----	Poorly suited-----	Small stones.
Hardol-----	Poorly suited-----	Small stones.
512:		
Adobe-----	Poorly suited-----	Too arid, droughty, small stones.
Cavehill-----	Poorly suited-----	Small stones.
Wardbay-----	Poorly suited-----	Small stones.
520:		
Haunchee-----	Poorly suited-----	Droughty, small stones.
Muiral-----	Suited-----	Droughty.
Wardbay-----	Poorly suited-----	Small stones.
530:		
Wardbay-----	Poorly suited-----	Small stones.
Adobe-----	Poorly suited-----	Too arid, droughty, small stones.
Haunchee-----	Poorly suited-----	Droughty, small stones.
532:		
Onkeyo-----	Poorly suited-----	Droughty, small stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
Tecomar-----	Poorly suited-----	Droughty, small stones.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
540:		
Kunzler-----	Poorly suited-----	Excess salt, excess sodium.
Sycomat-----	Poorly suited-----	Too arid.
541:		
Kunzler-----	Poorly suited-----	Excess salt, excess sodium.
Sheffit-----	Poorly suited-----	Rooting depth, excess salt, excess sodium.
550:		
Urmafot-----	Poorly suited-----	Droughty.
Bobs-----	Poorly suited-----	Droughty.
Urmafot-----	Poorly suited-----	Droughty.
551:		
Urmafot-----	Poorly suited-----	Droughty.
Bobs-----	Poorly suited-----	Droughty.
552:		
Urmafot-----	Poorly suited-----	Droughty, small stones.
Pharo-----	Suited-----	Too arid, droughty.
554:		
Urmafot-----	Poorly suited-----	Droughty, small stones.
Tecomar-----	Poorly suited-----	Droughty, small stones.
Urmafot-----	Poorly suited-----	Droughty, small stones.
561:		
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
Urmafot-----	Poorly suited-----	Droughty, small stones.
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
562:		
Bobs-----	Poorly suited-----	Droughty, small stones.
563:		
Bobs-----	Poorly suited-----	Droughty.
Pyrat-----	Poorly suited-----	Droughty, small stones.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
575:		
Pookaloo-----	Poorly suited-----	Droughty, small stones.
Caveshill-----	Poorly suited-----	Small stones.
Rock Outcrop-----	Not rated-----	
576:		
Pookaloo-----	Poorly suited-----	Droughty, small stones.
Tecomar-----	Poorly suited-----	Droughty, small stones.
Onkeyo-----	Poorly suited-----	Droughty, small stones.
582:		
Sheffit-----	Poorly suited-----	Excess salt, excess sodium.
Sheffit-----	Poorly suited-----	Rooting depth, excess salt, excess sodium.
Katelana-----	Poorly suited-----	Too arid, excess salt.
590:		
Upatad-----	Poorly suited-----	Droughty, small stones.
Segura-----	Poorly suited-----	Droughty.
600:		
Onkeyo-----	Poorly suited-----	Droughty, small stones.
Amene-----	Poorly suited-----	Droughty, small stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
610:		
Wintermute-----	Poorly suited-----	Too arid.
Eastwell-----	Poorly suited-----	Too arid, droughty, excess sodium.
614:		
Wintermute-----	Poorly suited-----	Too arid.
Eastwell-----	Poorly suited-----	Too arid, droughty, excess sodium.
Zerk-----	Poorly suited-----	Too arid.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
617:		
Wintermute-----	Poorly suited-----	Too arid.
Zerk-----	Poorly suited-----	Too arid.
Loray-----	Poorly suited-----	Too arid.
620:		
Atlow-----	Poorly suited-----	Too arid, droughty, small stones.
Atlow-----	Poorly suited-----	Too arid, droughty, small stones.
631:		
Eastwell-----	Poorly suited-----	Too arid, droughty, excess sodium.
Wintermute-----	Poorly suited-----	Too arid.
Okan-----	Suited-----	Too arid, droughty.
632:		
Eastwell-----	Poorly suited-----	Too arid, droughty, excess sodium.
Zafod-----	Poorly suited-----	Droughty.
634:		
Eastwell-----	Poorly suited-----	Too arid, droughty, excess sodium.
Shabliss-----	Poorly suited-----	Droughty.
Izar-----	Poorly suited-----	Too arid, droughty, small stones.
636:		
Eastwell-----	Poorly suited-----	Too arid, droughty, small stones.
Hundraw-----	Poorly suited-----	Too arid, droughty, depth to rock.
Okan-----	Suited-----	Too arid, droughty.
650:		
Mizpah-----	Poorly suited-----	Too arid, rooting depth.
Zerk-----	Poorly suited-----	Too arid.
Wintermute-----	Poorly suited-----	Too arid.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
671:		
Idway-----	Suited-----	Too arid, droughty.
Mysol-----	Poorly suited-----	Too arid, excess salt, excess sodium.
672:		
Idway-----	Suited-----	Too arid, droughty.
James Canyon-----	Suited-----	Too arid.
680:		
Simon-----	Suited-----	Too arid, erodes easily.
Graley-----	Poorly suited-----	Droughty, rooting depth.
Chen-----	Poorly suited-----	Too arid, droughty, small stones.
691:		
Tarnach-----	Poorly suited-----	Droughty, small stones.
Tarnach-----	Poorly suited-----	Droughty, small stones.
Wesfil-----	Poorly suited-----	Too arid, droughty, small stones.
692:		
Tarnach-----	Poorly suited-----	Droughty, small stones.
Upatah-----	Poorly suited-----	Droughty, small stones.
Wesfil-----	Poorly suited-----	Too arid, droughty, small stones.
700:		
Shabliss-----	Poorly suited-----	Droughty.
Tulase-----	Suited-----	Too arid.
Linoyer-----	Suited-----	Too arid.
720:		
Mysol-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Mysol-----	Poorly suited-----	Too arid, excess salt, excess sodium.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
730:		
Idway-----	Poorly suited-----	Too sandy, soil blowing.
Kawich-----	Poorly suited-----	Too arid, droughty, too sandy.
Mysol-----	Poorly suited-----	Too arid, excess salt, excess sodium.
733:		
Idway-----	Poorly suited-----	Too sandy, soil blowing.
Idway-----	Suited-----	Too arid, droughty.
Mysol-----	Poorly suited-----	Too arid, excess salt, excess sodium.
740:		
Upatad-----	Poorly suited-----	Droughty, small stones.
Pioche-----	Poorly suited-----	Droughty, small stones, rooting depth.
Tarnach-----	Poorly suited-----	Droughty, small stones.
760:		
Playas-----	Poorly suited-----	Too arid, droughty, rooting depth.
761:		
Umberland-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Umberland-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
762:		
Umberland-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Playas-----	Poorly suited-----	Too arid, droughty, rooting depth.
763:		
Equis-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Umberland-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Duffer-----	Poorly suited-----	Too arid, excess salt, excess sodium.
764:		
Umberland-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Rubylake-----	Poorly suited-----	Excess salt.
Orupa-----	Poorly suited-----	Excess salt.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
765:		
Umberland-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Umberland-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Wendane-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
767:		
Umberland-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Umberland-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Orupa-----	Poorly suited-----	Excess salt.
781:		
Mysol-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Benin-----	Poorly suited-----	Too arid, rooting depth, excess salt.
Wendane-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
800:		
Mazuma-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Toano-----	Poorly suited-----	Too arid.
801:		
Mazuma-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Zerk-----	Poorly suited-----	Too arid.
Okan-----	Suited-----	Too arid, droughty.
804:		
Mazuma-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Kawich-----	Poorly suited-----	Too arid, droughty, too sandy.
Playas-----	Poorly suited-----	Too arid, droughty, rooting depth.
807:		
Mazuma-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Kunzler-----	Poorly suited-----	Excess salt, excess sodium.
Zerk-----	Poorly suited-----	Too arid.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
823:		
Kunzler-----	Poorly suited-----	Excess salt, excess sodium.
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Blimo-----	Suited-----	Too arid, excess salt.
824:		
Kunzler-----	Poorly suited-----	Excess salt, excess sodium.
Katelana-----	Poorly suited-----	Too arid, excess salt.
827:		
Kunzler-----	Poorly suited-----	Excess salt, excess sodium.
James Canyon-----	Well suited-----	
James Canyon-----	Suited-----	Too arid.
828:		
Kunzler-----	Poorly suited-----	Excess salt, excess sodium.
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Wendane-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
830:		
Pharo-----	Suited-----	Too arid, droughty, erodes easily.
Kzin-----	Poorly suited-----	Droughty, small stones, depth to rock.
Pharo-----	Suited-----	Too arid, droughty.
842:		
Katelana-----	Poorly suited-----	Too arid, excess salt.
Timpie-----	Poorly suited-----	Too arid, excess salt, excess sodium.
843:		
Katelana-----	Poorly suited-----	Too arid, excess salt.
Kawich-----	Poorly suited-----	Too arid, droughty, too sandy.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
845:		
Katelana-----	Poorly suited-----	Too arid, excess salt.
Ragtown-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Timpie-----	Poorly suited-----	Too arid, excess salt, excess sodium.
847:		
Mazuma-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Blimo-----	Suited-----	Too arid, excess salt.
Wintermute-----	Poorly suited-----	Too arid.
850:		
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
Wintermute-----	Poorly suited-----	Too arid.
Okan-----	Suited-----	Too arid, droughty.
851:		
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
Zimbob-----	Poorly suited-----	Too arid, droughty, small stones.
Tecomar-----	Poorly suited-----	Droughty, small stones.
852:		
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Shabliss-----	Poorly suited-----	Droughty.
854:		
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
Automal-----	Suited-----	Too arid, droughty.
Shabliss-----	Poorly suited-----	Droughty.
856:		
Palinor-----	Poorly suited-----	Too arid, droughty.
Parisa-----	Suited-----	Too arid, droughty.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
857:		
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
Shabliss-----	Poorly suited-----	Droughty.
Linoyer-----	Suited-----	Too arid.
858:		
Palinor-----	Poorly suited-----	Too arid, droughty, small stones.
Automal-----	Suited-----	Too arid, droughty.
Linoyer-----	Suited-----	Too arid.
870:		
Theriot-----	Poorly suited-----	Too arid, droughty, small stones.
Zimbob-----	Poorly suited-----	Droughty, small stones.
880:		
Duffer-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Duffer-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Kolda-----	Poorly suited-----	Excess salt.
881:		
Duffer-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Kunzler-----	Poorly suited-----	Excess salt, excess sodium.
882:		
Duffer-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Kolda-----	Poorly suited-----	Excess salt.
894:		
Zerk-----	Poorly suited-----	Too arid.
Threese-----	Suited-----	Too arid, droughty.
Mazuma-----	Poorly suited-----	Too arid, excess salt, excess sodium.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
900:		
Zerk-----	Poorly suited-----	Too arid.
Automal-----	Suited-----	Too arid, droughty.
Linoyer-----	Suited-----	Too arid.
910:		
Ragtown-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Ragtown-----	Poorly suited-----	Too arid, excess salt, excess sodium.
912:		
Katelana-----	Poorly suited-----	Too arid, excess salt.
Katelana-----	Poorly suited-----	Too arid, excess salt.
914:		
Katelana-----	Poorly suited-----	Too arid, excess salt.
Benin-----	Poorly suited-----	Too arid, rooting depth, excess salt.
Sheffit-----	Poorly suited-----	Rooting depth, excess salt, excess sodium.
917:		
Katelana-----	Poorly suited-----	Too arid, excess salt.
Sheffit-----	Poorly suited-----	Rooting depth, excess salt, excess sodium.
Ragtown-----	Poorly suited-----	Too arid, excess salt, excess sodium.
918:		
Katelana-----	Poorly suited-----	Too arid, excess salt.
Zorravista-----	Suited-----	Too arid, droughty, too sandy.
Playas-----	Poorly suited-----	Too arid, droughty, rooting depth.
930:		
Okan-----	Suited-----	Too arid, droughty.
Toano-----	Poorly suited-----	Too arid.
Loray-----	Poorly suited-----	Too arid.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
932:		
Okan-----	Suited-----	Too arid, droughty.
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
941:		
Sheffit-----	Poorly suited-----	Rooting depth, excess salt, excess sodium.
Sheffit-----	Poorly suited-----	Excess salt, excess sodium.
Zorravista-----	Suited-----	Too arid, droughty, too sandy.
943:		
Sheffit-----	Poorly suited-----	Rooting depth, excess salt, excess sodium.
Umberland-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
960:		
Gravier-----	Poorly suited-----	Too arid, droughty, small stones.
Zerk-----	Poorly suited-----	Too arid.
961:		
Gravier-----	Poorly suited-----	Too arid, too sandy, excess salt.
Piltdown-----	Poorly suited-----	Too arid.
Zerk-----	Poorly suited-----	Too arid.
972:		
Zimbob-----	Poorly suited-----	Droughty, small stones.
Zimbob-----	Poorly suited-----	Too arid, droughty, small stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
974:		
Zimbob-----	Poorly suited-----	Droughty, small stones.
Tecomar-----	Poorly suited-----	Droughty, small stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
975:		
Zimbob-----	Poorly suited-----	Droughty, small stones.
Tecomar-----	Poorly suited-----	Droughty, small stones.
Tecomar-----	Poorly suited-----	Droughty, small stones.
980:		
Onkeyo-----	Poorly suited-----	Droughty, small stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
Zimbob-----	Poorly suited-----	Droughty, small stones.
990:		
Hyzen-----	Poorly suited-----	Too arid, droughty, large stones.
Zimbob-----	Poorly suited-----	Too arid, droughty, small stones.
991:		
Hyzen-----	Poorly suited-----	Too arid, droughty, large stones.
Cavehill-----	Poorly suited-----	Small stones.
Tecomar-----	Poorly suited-----	Droughty, small stones.
1000:		
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Zerk-----	Poorly suited-----	Too arid.
1001:		
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Okan-----	Suited-----	Too arid, droughty.
Eastwell-----	Poorly suited-----	Too arid, droughty, excess sodium.
1002:		
Threesee-----	Suited-----	Too arid, droughty.
Kunzler-----	Poorly suited-----	Excess salt, excess sodium.
Threesee-----	Suited-----	Too arid, droughty.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1003:		
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Hundraw-----	Poorly suited-----	Too arid, droughty, depth to rock.
Tulase-----	Suited-----	Too arid.
1004:		
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Parisa-----	Suited-----	Too arid, droughty, excess sodium.
Tulase-----	Suited-----	Too arid.
1005:		
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Zerk-----	Poorly suited-----	Too arid.
Parisa-----	Suited-----	Too arid, droughty, excess sodium.
1006:		
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Blimo-----	Suited-----	Too arid, droughty, excess salt.
1007:		
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Parisa-----	Suited-----	Too arid, droughty, excess sodium.
Automal-----	Suited-----	Too arid, droughty.
1009:		
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Tulase-----	Suited-----	Too arid.
Wintermute-----	Poorly suited-----	Too arid.
1020:		
Okan-----	Suited-----	Too arid, droughty.
Eastwall-----	Poorly suited-----	Too arid, droughty, excess sodium.
Blimo-----	Suited-----	Too arid, excess salt.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1023:		
Okan-----	Suited-----	Too arid, droughty.
Okan-----	Suited-----	Too arid, droughty.
Katelana-----	Poorly suited-----	Too arid, excess salt.
1030:		
Segura-----	Poorly suited-----	Droughty.
Bullump-----	Poorly suited-----	Small stones.
Hutchley-----	Poorly suited-----	Too arid, droughty, small stones.
1040:		
Segura-----	Poorly suited-----	Droughty.
Pioche-----	Poorly suited-----	Droughty, small stones, rooting depth.
Chen-----	Poorly suited-----	Too arid, droughty, small stones.
1061:		
Pioche-----	Poorly suited-----	Droughty, small stones, rooting depth.
Cucamungo-----	Poorly suited-----	Droughty, small stones.
Rock Outcrop-----	Not rated-----	
1070:		
Zafod-----	Poorly suited-----	Droughty.
Automal-----	Suited-----	Too arid, droughty.
Okan-----	Suited-----	Too arid, droughty.
1080:		
Cotant-----	Poorly suited-----	Droughty, rooting depth.
Segura-----	Poorly suited-----	Droughty.
1111:		
Parisa-----	Suited-----	Too arid, droughty, excess sodium.
1120:		
Okan-----	Suited-----	Too arid, droughty.
Automal-----	Suited-----	Too arid, droughty.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1150:		
Adobe-----	Poorly suited-----	Too arid, droughty, small stones.
Wardbay-----	Poorly suited-----	Small stones.
Haunchee-----	Poorly suited-----	Droughty, small stones.
1161:		
Pharo-----	Suited-----	Too arid, droughty.
Bobs-----	Poorly suited-----	Droughty.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
1171:		
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Automal-----	Suited-----	Too arid, droughty.
Gravier-----	Poorly suited-----	Too arid, droughty, small stones.
1172:		
Pyrat-----	Poorly suited-----	Droughty, small stones.
Automal-----	Poorly suited-----	Droughty, small stones.
Automal-----	Suited-----	Too arid, droughty.
1173:		
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Automal-----	Suited-----	Too arid, droughty.
1174:		
Pyrat-----	Suited-----	Too arid, droughty, excess salt.
Tosser-----	Poorly suited-----	Droughty, small stones.
1180:		
Haunchee-----	Poorly suited-----	Droughty, small stones.
Cavehill-----	Suited-----	Too arid, droughty.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1181:		
Haunchee-----	Poorly suited-----	Droughty, small stones.
Halacan-----	Poorly suited-----	Too arid, droughty, small stones.
Wardbay-----	Poorly suited-----	Small stones.
1190:		
Upatad-----	Poorly suited-----	Droughty, small stones.
Atlow-----	Poorly suited-----	Too arid, droughty, small stones.
Upatad-----	Poorly suited-----	Droughty, small stones.
1191:		
Upatad-----	Poorly suited-----	Droughty, small stones.
Pioche-----	Poorly suited-----	Droughty, small stones, rooting depth.
Rock Outcrop-----	Not rated-----	
1200:		
Hardol-----	Poorly suited-----	Small stones, erodes easily.
Hardzem-----	Poorly suited-----	Droughty.
Rock Outcrop-----	Not rated-----	
1201:		
Hardol-----	Poorly suited-----	Small stones, erodes easily.
Rock Outcrop-----	Not rated-----	
Wardbay-----	Poorly suited-----	Small stones.
1210:		
Blimo-----	Suited-----	Too arid, excess salt.
Kunzler-----	Poorly suited-----	Excess salt, excess sodium.
Linoyer-----	Suited-----	Too arid.
1213:		
Blimo-----	Suited-----	Too arid, droughty, excess salt.
Threesee-----	Suited-----	Too arid, droughty.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1215:		
Blimo-----	Suited-----	Too arid, droughty, excess salt.
Zorravista-----	Suited-----	Too arid, droughty, too sandy.
1216:		
Blimo-----	Suited-----	Too arid, droughty, excess salt.
Idway-----	Suited-----	Too arid, droughty.
Mazuma-----	Poorly suited-----	Too arid, excess salt, excess sodium.
1220:		
Onkeyo-----	Poorly suited-----	Droughty, small stones.
Adobe-----	Poorly suited-----	Too arid, droughty, small stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
1230:		
Hardzem-----	Poorly suited-----	Droughty, small stones.
Haunchee-----	Poorly suited-----	Droughty, small stones.
Wardbay-----	Poorly suited-----	Small stones.
1240:		
Benin-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Benin-----	Poorly suited-----	Too arid, rooting depth, excess salt.
1241:		
Benin-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Playas-----	Poorly suited-----	Too arid, droughty, rooting depth.
Benin-----	Poorly suited-----	Too arid, rooting depth, excess salt.
1250:		
Tecomar-----	Poorly suited-----	Droughty, small stones.
Pookaloo-----	Poorly suited-----	Droughty, small stones.
1270:		
Katelana-----	Poorly suited-----	Too arid, excess salt.
Sheffit-----	Poorly suited-----	Rooting depth, excess salt, excess sodium.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1271:		
Uvada-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Ragtown-----	Poorly suited-----	Too arid, excess salt, excess sodium.
1272:		
Katelana-----	Poorly suited-----	Too arid, excess salt.
Kawich-----	Poorly suited-----	Too arid, droughty, too sandy.
1280:		
Sycomat-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Kunzler-----	Poorly suited-----	Excess salt, excess sodium.
1281:		
Sycomat-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Mazuma-----	Poorly suited-----	Too arid, excess salt, excess sodium.
1290:		
Heist-----	Suited-----	Too arid, excess salt, excess sodium.
Blimo-----	Suited-----	Too arid, excess salt.
1300:		
Cavehill-----	Poorly suited-----	Small stones.
Haunchee-----	Poorly suited-----	Droughty, small stones.
Hardzem-----	Poorly suited-----	Droughty.
1360:		
Toba-----	Poorly suited-----	Too arid, excess sodium.
Appian-----	Poorly suited-----	Too arid, excess salt, excess sodium.
1370:		
Orupa-----	Poorly suited-----	Excess salt.
Playas-----	Poorly suited-----	Too arid, droughty, rooting depth.
Boofuss-----	Poorly suited-----	Excess salt, excess sodium, too crusty.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1380:		
Hulderman-----	Suited-----	Too arid, excess salt.
Toba-----	Poorly suited-----	Too arid, excess sodium.
Benin-----	Poorly suited-----	Too arid, excess salt, excess sodium.
1390:		
Wendane-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Mysol-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Toba-----	Poorly suited-----	Too arid, excess sodium.
1410:		
Threesee-----	Suited-----	Too arid, droughty.
Tosser-----	Poorly suited-----	Droughty, small stones.
1411:		
Threesee-----	Suited-----	Too arid, droughty.
Linoyer-----	Suited-----	Too arid, droughty.
Okan-----	Suited-----	Too arid, droughty.
1412:		
Threesee-----	Suited-----	Too arid, droughty.
Idway-----	Poorly suited-----	Too sandy.
1413:		
Idway-----	Suited-----	Too arid, droughty.
Zorravista-----	Suited-----	Too arid, droughty, too sandy.
Kunzler-----	Poorly suited-----	Excess salt, excess sodium.
1414:		
Threesee-----	Suited-----	Too arid, droughty.
Shantown-----	Suited-----	Too arid, droughty.
Kunzler-----	Poorly suited-----	Excess salt, excess sodium.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1430:		
Pookaloo-----	Poorly suited-----	Droughty, small stones.
Tecomar-----	Poorly suited-----	Too arid, droughty, small stones.
Rock Outcrop-----	Not rated-----	
1440:		
Boofuss-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Boofuss-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Equis-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
1441:		
Boofuss-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Wendane-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Umberland-----	Poorly suited-----	Too arid, excess salt, excess sodium.
1450:		
Filttdown-----	Poorly suited-----	Too arid.
Kawich-----	Poorly suited-----	Too arid, droughty, too sandy.
1460:		
Tosser-----	Poorly suited-----	Droughty, small stones.
Threesee-----	Suited-----	Too arid, droughty.
1471:		
Timpie-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Kunzler-----	Poorly suited-----	Excess salt, excess sodium.
Threesee-----	Suited-----	Too arid, droughty.
1480:		
Tulase-----	Suited-----	Too arid.
Lincyer-----	Suited-----	Too arid.
1500:		
Tocele-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Loray-----	Poorly suited-----	Too arid.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1510:		
Izamatch-----	Poorly suited-----	Too arid, droughty.
Cliffdown-----	Poorly suited-----	Too arid, droughty, small stones.
1520:		
Izamatch-----	Poorly suited-----	Too arid, droughty.
Izamatch-----	Poorly suited-----	Too arid, droughty.
Luning-----	Poorly suited-----	Too arid, droughty.
1521:		
Izamatch-----	Poorly suited-----	Too arid, droughty.
Izamatch-----	Poorly suited-----	Too arid, droughty.
Theriot-----	Poorly suited-----	Too arid, droughty, large stones.
1522:		
Izamatch-----	Poorly suited-----	Too arid, droughty.
Smaug-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Badland-----	Poorly suited-----	Too arid, droughty, excess salt.
1530:		
Theriot-----	Poorly suited-----	Too arid, droughty, large stones.
Theriot-----	Poorly suited-----	Too arid, droughty, small stones.
Izamatch-----	Poorly suited-----	Too arid, droughty, small stones.
1531:		
Theriot-----	Poorly suited-----	Too arid, droughty, large stones.
Izamatch-----	Poorly suited-----	Too arid, droughty.
Rock Outcrop-----	Not rated-----	
1532:		
Theriot-----	Poorly suited-----	Too arid, droughty, small stones.
Theriot-----	Poorly suited-----	Too arid, droughty, large stones.
Rock Outcrop-----	Not rated-----	

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1540:		
Kyler-----	Poorly suited-----	Too arid, droughty, small stones.
Amtoft-----	Poorly suited-----	Droughty, small stones.
Amtoft-----	Poorly suited-----	Too arid, droughty.
1541:		
Kyler-----	Poorly suited-----	Droughty, small stones.
Kyler-----	Poorly suited-----	Droughty, small stones.
Rock Outcrop-----	Not rated-----	
1542:		
Kyler-----	Poorly suited-----	Droughty, small stones.
Amtoft-----	Poorly suited-----	Too arid, droughty, small stones.
Jericho-----	Poorly suited-----	Droughty, small stones.
1550:		
Jericho-----	Poorly suited-----	Droughty, small stones.
Jericho-----	Poorly suited-----	Droughty, small stones.
1560:		
Toano-----	Poorly suited-----	Too arid.
Timpie-----	Poorly suited-----	Too arid, excess salt, excess sodium.
1570:		
Jericho-----	Poorly suited-----	Droughty, small stones.
Xeric Torriorthents-----	Poorly suited-----	Too arid, droughty.
1580:		
Armespan-----	Poorly suited-----	Small stones, excess salt.
Jericho-----	Poorly suited-----	Droughty, small stones.
1581:		
Armespan-----	Poorly suited-----	Small stones, excess salt.
Kyler-----	Poorly suited-----	Droughty, small stones.
Heist-----	Suited-----	Too arid, excess salt, excess sodium.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1582:		
Armespan-----	Poorly suited-----	Small stones, excess salt.
Xeric Torriorthents-----	Poorly suited-----	Too arid, droughty.
1590:		
Luning-----	Poorly suited-----	Too arid, droughty.
Luning-----	Poorly suited-----	Too arid, droughty.
Loray-----	Poorly suited-----	Too arid.
1591:		
Luning-----	Poorly suited-----	Too arid, droughty.
Izamatch-----	Poorly suited-----	Too arid, droughty, small stones.
Badland-----	Poorly suited-----	Too arid, droughty, excess salt.
1600:		
Eaglepass-----	Poorly suited-----	Too arid, droughty, small stones.
Amtoft-----	Poorly suited-----	Too arid, droughty, small stones.
1610:		
Xeric Torriorthents-----	Poorly suited-----	Too arid, droughty.
Armespan-----	Poorly suited-----	Small stones, excess salt.
Badland-----	Not rated-----	
1620:		
Kolda-----	Suited-----	Excess salt, excess sodium.
Duffer-----	Poorly suited-----	Too arid, excess salt, excess sodium.
Sonoma-----	Suited-----	Excess salt, excess sodium.
1621:		
Kolda-----	Suited-----	Excess salt.
Rubylake-----	Poorly suited-----	Excess salt.
Kolda-----	Suited-----	Excess salt, excess sodium.
1622:		
Kolda-----	Suited-----	Excess salt, excess sodium.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1623:		
Kolda-----	Suited-----	Excess salt, excess sodium.
Water-----	Not rated-----	
1630:		
Pookaloo-----	Poorly suited-----	Droughty, small stones.
Cavehill-----	Poorly suited-----	Small stones.
Rock Outcrop-----	Not rated-----	
1631:		
Pookaloo-----	Poorly suited-----	Droughty, small stones.
Tecomar-----	Poorly suited-----	Droughty, small stones.
Wardbay-----	Poorly suited-----	Small stones.
1640:		
Jungo-----	Poorly suited-----	Too arid, small stones.
Jungo-----	Poorly suited-----	Too arid, small stones.
1650:		
Shantown-----	Suited-----	Too arid, droughty.
Zorravista-----	Suited-----	Too arid, droughty, too sandy.
1651:		
Shantown-----	Suited-----	Too arid, droughty.
Shantown-----	Suited-----	Too arid, droughty.
1660:		
Wendane-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Logan-----	Well suited-----	
1670:		
Wendane-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Logan-----	Well suited-----	
Wendane-----	Poorly suited-----	Excess salt, excess sodium, too crusty.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1680:		
Rubylake-----	Poorly suited-----	Excess salt.
Kolda-----	Suited-----	Excess salt.
Wendane-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
1681:		
Wendane-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Logan-----	Well suited-----	
Umberland-----	Poorly suited-----	Too arid, excess salt, excess sodium.
1690:		
Krenka-----	Well suited-----	
Secrepass-----	Poorly suited-----	Rooting depth.
1700:		
Heechee-----	Suited-----	Too arid, droughty.
Rubicity-----	Suited-----	Too arid, droughty.
Heechee-----	Poorly suited-----	Large stones.
1702:		
Heechee-----	Suited-----	Too arid, droughty.
McIvey-----	Poorly suited-----	Small stones.
Rubicity-----	Suited-----	Too arid, droughty.
1710:		
James Canyon-----	Well suited-----	
Wendane-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
1711:		
James Canyon-----	Well suited-----	
Wendane-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Wendane-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
1720:		
Welch-----	Well suited-----	

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1721:		
Welch-----	Well suited-----	
Welsum-----	Well suited-----	
1722:		
Welch-----	Suited-----	Too arid.
Slipback-----	Poorly suited-----	Excess sodium.
Welch-----	Well suited-----	
1723:		
Welch-----	Well suited-----	
Welch-----	Well suited-----	
1730:		
McIvey-----	Poorly suited-----	Small stones.
Donna-----	Poorly suited-----	Rooting depth.
1731:		
McIvey-----	Poorly suited-----	Small stones.
Chen-----	Poorly suited-----	Too arid, droughty, small stones.
Donna-----	Poorly suited-----	Rooting depth.
1732:		
McIvey-----	Well suited-----	
Stampede-----	Suited-----	Too arid.
Heechee-----	Suited-----	Too arid, droughty.
1740:		
Slipback-----	Poorly suited-----	Excess sodium.
Welch-----	Suited-----	Too arid.
1741:		
Slipback-----	Poorly suited-----	Excess sodium.
Shantown-----	Suited-----	Too arid, droughty.
Toba-----	Poorly suited-----	Too arid, excess sodium.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1750:		
Heechee-----	Suited-----	Too arid, droughty.
Welch-----	Well suited-----	
Welch-----	Suited-----	Too arid.
1760:		
Lykal-----	Suited-----	Too arid, excess sodium.
Wendane-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
James Canyon-----	Well suited-----	
1770:		
Donna-----	Poorly suited-----	Rooting depth.
McIvey-----	Poorly suited-----	Small stones.
Heechee-----	Poorly suited-----	Small stones.
1780:		
Schoer-----	Poorly suited-----	Rooting depth.
Welch-----	Well suited-----	
1790:		
Donna-----	Poorly suited-----	Rooting depth.
Krenka-----	Well suited-----	
McIvey-----	Poorly suited-----	Small stones.
1800:		
Chen-----	Poorly suited-----	Too arid, droughty, small stones.
Graley-----	Poorly suited-----	Droughty, rooting depth.
Rock Outcrop-----	Not rated-----	
1810:		
Sumine-----	Poorly suited-----	Droughty, small stones, erodes easily.
Tusel-----	Suited-----	Too arid.
Hapgood-----	Poorly suited-----	Small stones.

TABLE 6--SUITABILITY FOR RANGELAND SEEDING--Continued

Soil name and map symbol	Limitation rating	Restrictive features
1820:		
Hussa-----	Suited-----	Too arid, excess salt.
Halleck-----	Well suited-----	
Welsum-----	Well suited-----	
1831:		
Enko-----	Poorly suited-----	Excess salt.
Kelk-----	Suited-----	Too arid, excess salt.
Enko-----	Poorly suited-----	Excess salt.
1840:		
Amene-----	Poorly suited-----	Droughty, small stones.
Belsac-----	Poorly suited-----	Small stones.
Chen-----	Poorly suited-----	Too arid, droughty, small stones.
1850:		
Bullump-----	Poorly suited-----	Small stones.
Cleavage-----	Poorly suited-----	Too arid, droughty, small stones.
Rock Outcrop-----	Not rated-----	
1861:		
Equis-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Devilsgait-----	Well suited-----	
1862:		
Equis-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Equis-----	Poorly suited-----	Excess salt, excess sodium, too crusty.
Kolda-----	Poorly suited-----	Too arid, excess salt.
1870:		
Denied Access-----	Not rated-----	
1880:		
Water-----	Not rated-----	

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY

(Only the map units suitable for production of trees are listed)

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									m3/ha	
0053: Palinor-----	---	---	---	---	---	---	-----	---	---	---
Urmafot-----	---	---	---	---	---	---	-----	---	---	---
0062: Amtoft-----	---	---	---	---	---	---	-----	---	---	---
Rock Outcrop----	---	---	---	---	---	---	-----	---	---	---
Amtoft-----	---	---	---	---	---	---	-----	---	---	---
0066: Zimbob-----	---	---	---	---	---	---	-----	---	---	---
Zimbob-----	---	---	---	---	---	---	-----	---	---	---
0067: Tecomar-----	---	---	---	---	---	---	-----	---	---	---
Tecomar-----	---	---	---	---	---	---	-----	---	---	---
Pockaloo-----	OR	Severe	Severe	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon----	20 20	0 0	---
0069: Zimbob-----	---	---	---	---	---	---	-----	---	---	---
Hyzen-----	---	---	---	---	---	---	-----	---	---	---
Rock Outcrop----	---	---	---	---	---	---	-----	---	---	---
0070: Stewval-----	---	---	---	---	---	---	-----	---	---	---
Eastwell-----	---	---	---	---	---	---	-----	---	---	---
0071: Stewval-----	---	---	---	---	---	---	-----	---	---	---
Wesfil-----	---	---	---	---	---	---	-----	---	---	---
Rock Outcrop----	---	---	---	---	---	---	-----	---	---	---
0080: Stewval-----	---	---	---	---	---	---	-----	---	---	---
0092: Wesfil-----	---	---	---	---	---	---	-----	---	---	---
Wintermute-----	---	---	---	---	---	---	-----	---	---	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
0098: Wesfil-----	---	---	---	---	---	---	-----	---	---	---
Tarnach-----	---	---	---	---	---	---	-----	---	---	---
Wesfil-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									m3/ha	
0099:										
Wesfil-----	---	---	---	---	---	---	-----	---	---	---
Armespan-----	---	---	---	---	---	---	-----	---	---	---
Heist-----	---	---	---	---	---	---	-----	---	---	---
0100:										
Benin-----	---	---	---	---	---	---	-----	---	---	---
Mazuma-----	---	---	---	---	---	---	-----	---	---	---
0101:										
Toano-----	---	---	---	---	---	---	-----	---	---	---
Lincoyer-----	---	---	---	---	---	---	-----	---	---	---
0103:										
Benin-----	---	---	---	---	---	---	-----	---	---	---
Playas-----	---	---	---	---	---	---	-----	---	---	---
0111:										
Gravier-----	---	---	---	---	---	---	-----	---	---	---
Armespan-----	---	---	---	---	---	---	-----	---	---	---
113:										
Gravier-----	---	---	---	---	---	---	-----	---	---	---
Gravier-----	---	---	---	---	---	---	-----	---	---	---
Jericho-----	---	---	---	---	---	---	-----	---	---	---
0116:										
Gravier-----	---	---	---	---	---	---	-----	---	---	---
Izamatch-----	---	---	---	---	---	---	-----	---	---	---
Loray-----	---	---	---	---	---	---	-----	---	---	---
0118:										
Gravier-----	---	---	---	---	---	---	-----	---	---	---
Automal-----	---	---	---	---	---	---	-----	---	---	---
Zerk-----	---	---	---	---	---	---	-----	---	---	---
0119:										
Wintermute-----	---	---	---	---	---	---	-----	---	---	---
Lincoyer-----	---	---	---	---	---	---	-----	---	---	---
0120:										
Izamatch-----	---	---	---	---	---	---	-----	---	---	---
Armespan-----	---	---	---	---	---	---	-----	---	---	---
Cliffdown-----	---	---	---	---	---	---	-----	---	---	---
0122:										
Gravier-----	---	---	---	---	---	---	-----	---	---	---
Izamatch-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									m3/ha	
0130:										
Toosle-----	---	---	---	---	---	---	-----	---	---	---
Benin-----	---	---	---	---	---	---	-----	---	---	---
0140:										
Gollaher-----	---	---	---	---	---	---	-----	---	---	---
Belsac-----	---	---	---	---	---	---	-----	---	---	---
0151:										
Hopeka-----	OR	Severe	Severe	Severe	Slight	Moderate	Utah juniper-----	33	0	---
							singleleaf pinyon---	33	0	---
Amene-----	---	---	---	---	---	---	-----	---	---	---
Rock Outcrop----	---	---	---	---	---	---	-----	---	---	---
0154:										
Hopeka-----	OR	Severe	Severe	Severe	Slight	Moderate	Utah juniper-----	33	0	---
							singleleaf pinyon---	33	0	---
Tecomar-----	---	---	---	---	---	---	-----	---	---	---
0160:										
Saltair-----	---	---	---	---	---	---	-----	---	---	---
Kawich-----	---	---	---	---	---	---	-----	---	---	---
0161:										
Saltair-----	---	---	---	---	---	---	-----	---	---	---
Playas-----	---	---	---	---	---	---	-----	---	---	---
0171:										
Loray-----	---	---	---	---	---	---	-----	---	---	---
Gravier-----	---	---	---	---	---	---	-----	---	---	---
Toano-----	---	---	---	---	---	---	-----	---	---	---
0173:										
Cliffdown-----	---	---	---	---	---	---	-----	---	---	---
Armespan-----	---	---	---	---	---	---	-----	---	---	---
Izamatch-----	---	---	---	---	---	---	-----	---	---	---
0174:										
Wintermute-----	---	---	---	---	---	---	-----	---	---	---
Lincoyer-----	---	---	---	---	---	---	-----	---	---	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
0175:										
Loray-----	---	---	---	---	---	---	-----	---	---	---
Wintermute-----	---	---	---	---	---	---	-----	---	---	---
0176:										
Loray-----	---	---	---	---	---	---	-----	---	---	---
Zerk-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									m3/ha	
Zerk-----	---	---	---	---	---	---	-----	---	---	---
0181: Peeko-----	---	---	---	---	---	---	-----	---	---	---
Dowar-----	---	---	---	---	---	---	-----	---	---	---
Peeko-----	---	---	---	---	---	---	-----	---	---	---
0182: Peeko-----	---	---	---	---	---	---	-----	---	---	---
Peeko-----	---	---	---	---	---	---	-----	---	---	---
Gance-----	---	---	---	---	---	---	-----	---	---	---
0183: Peeko-----	---	---	---	---	---	---	-----	---	---	---
Enko-----	---	---	---	---	---	---	-----	---	---	---
Izar-----	---	---	---	---	---	---	-----	---	---	---
0185: Peeko-----	---	---	---	---	---	---	-----	---	---	---
Peeko-----	---	---	---	---	---	---	-----	---	---	---
Chiara-----	---	---	---	---	---	---	-----	---	---	---
0186: Palinor-----	---	---	---	---	---	---	-----	---	---	---
Pharo-----	---	---	---	---	---	---	-----	---	---	---
Hundraw-----	1D	Moderate	Moderate	Moderate	Slight	Moderate	Utah juniper-----	59	1	---
0187: Peeko-----	---	---	---	---	---	---	-----	---	---	---
Izar-----	OR	Moderate	Severe	Moderate	Moderate	Moderate	Utah juniper-----	18	0	---
Izar-----	---	---	---	---	---	---	-----	---	---	---
0188: Palinor-----	---	---	---	---	---	---	-----	---	---	---
Automal-----	---	---	---	---	---	---	-----	---	---	---
Izar-----	OR	Moderate	Severe	Moderate	Moderate	Moderate	Utah juniper-----	18	0	---
0192: Hutchley-----	---	---	---	---	---	---	-----	---	---	---
Simon-----	---	---	---	---	---	---	-----	---	---	---
0201: Tecomar-----	---	---	---	---	---	---	-----	---	---	---
Hopeka-----	OR	Severe	Severe	Severe	Slight	Moderate	Utah juniper----- singleleaf pinyon---	33 33	0 0	---
Rock Outcrop----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									m3/ha	
0203:										
Tecomar-----	---	---	---	---	---	---	-----	---	---	---
Pookaloo-----	OD	Moderate	Moderate	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	20 20	0 0	---
Pharo-----	---	---	---	---	---	---	-----	---	---	---
0210:										
Mazuma-----	---	---	---	---	---	---	-----	---	---	---
Hardhat-----	---	---	---	---	---	---	-----	---	---	---
Loray-----	---	---	---	---	---	---	-----	---	---	---
0211:										
Valmy-----	---	---	---	---	---	---	-----	---	---	---
Enko-----	---	---	---	---	---	---	-----	---	---	---
0230:										
Zafod-----	---	---	---	---	---	---	-----	---	---	---
Pyrat-----	---	---	---	---	---	---	-----	---	---	---
Palinor-----	---	---	---	---	---	---	-----	---	---	---
0231:										
Dacker-----	---	---	---	---	---	---	-----	---	---	---
Nevador-----	---	---	---	---	---	---	-----	---	---	---
Kelk-----	---	---	---	---	---	---	-----	---	---	---
0240:										
Hundraw-----	---	---	---	---	---	---	-----	---	---	---
Cobre-----	---	---	---	---	---	---	-----	---	---	---
0241:										
Hundraw-----	---	---	---	---	---	---	-----	---	---	---
Peeko-----	---	---	---	---	---	---	-----	---	---	---
Kzin-----	OD	Slight	Moderate	Severe	Slight	Moderate	Utah juniper----- singleleaf pinyon---	37 37	0 0	---
0242:										
Cobre-----	---	---	---	---	---	---	-----	---	---	---
Hundraw-----	OD	Moderate	Moderate	Moderate	Slight	Moderate	Utah juniper-----	18	0	---
Chiara-----	---	---	---	---	---	---	-----	---	---	---
0244:										
Hundraw-----	---	---	---	---	---	---	-----	---	---	---
Shabliss-----	---	---	---	---	---	---	-----	---	---	---
Palinor-----	---	---	---	---	---	---	-----	---	---	---
0250:										
Izar-----	---	---	---	---	---	---	-----	---	---	---
Holborn-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									m3/ha	
Kzin-----	OD	Slight	Moderate	Severe	Slight	Moderate	Utah juniper----- singleleaf pinyon---	37 37	0 0	---
0251: Izar-----	---	---	---	---	---	---	-----	---	---	---
Palinor-----	---	---	---	---	---	---	-----	---	---	---
Shabliss-----	---	---	---	---	---	---	-----	---	---	---
0252: Izar-----	---	---	---	---	---	---	-----	---	---	---
Hundraw-----	OD	Moderate	Moderate	Moderate	Slight	Moderate	Utah juniper-----	18	0	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
0260: Dewar-----	---	---	---	---	---	---	-----	---	---	---
Chiara-----	---	---	---	---	---	---	-----	---	---	---
Hunnton-----	---	---	---	---	---	---	-----	---	---	---
0270: Chiara-----	---	---	---	---	---	---	-----	---	---	---
Kelk-----	---	---	---	---	---	---	-----	---	---	---
Kelk-----	---	---	---	---	---	---	-----	---	---	---
0273: Chiara-----	---	---	---	---	---	---	-----	---	---	---
Dewar-----	---	---	---	---	---	---	-----	---	---	---
Enko-----	---	---	---	---	---	---	-----	---	---	---
0276: Chiara-----	---	---	---	---	---	---	-----	---	---	---
Peeko-----	---	---	---	---	---	---	-----	---	---	---
Urmafot-----	---	---	---	---	---	---	-----	---	---	---
0279: Chiara-----	---	---	---	---	---	---	-----	---	---	---
Parisa-----	---	---	---	---	---	---	-----	---	---	---
Enko-----	---	---	---	---	---	---	-----	---	---	---
0280: Oupico-----	---	---	---	---	---	---	-----	---	---	---
Enko-----	---	---	---	---	---	---	-----	---	---	---
0282: Shabliss-----	---	---	---	---	---	---	-----	---	---	---
Pyrat-----	---	---	---	---	---	---	-----	---	---	---
Okan-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									m3/ha	
0310:										
Sonoma-----	---	---	---	---	---	---	-----	---	---	---
Devilsgait-----	---	---	---	---	---	---	-----	---	---	---
Sonoma-----	---	---	---	---	---	---	-----	---	---	---
0311:										
Sonoma-----	---	---	---	---	---	---	-----	---	---	---
Kelk-----	---	---	---	---	---	---	-----	---	---	---
0330:										
Kzin-----	OD	Slight	Moderate	Severe	Slight	Moderate	Utah juniper----- singleleaf pinyon---	37 37	0 0	---
Holborn-----	---	---	---	---	---	---	-----	---	---	---
Kzin-----	OR	Moderate	Severe	Severe	Slight	Moderate	Utah juniper----- singleleaf pinyon---	37 37	0 0	---
0331:										
Kzin-----	OR	Moderate	Severe	Severe	Slight	Moderate	Utah juniper----- singleleaf pinyon---	37 37	0 0	---
Cobre-----	---	---	---	---	---	---	-----	---	---	---
Jackpot-----	---	---	---	---	---	---	-----	---	---	---
0333:										
Kzin-----	OD	Slight	Moderate	Severe	Slight	Moderate	Utah juniper----- singleleaf pinyon---	37 37	0 0	---
Holborn-----	---	---	---	---	---	---	-----	---	---	---
Onkeyo-----	---	---	---	---	---	---	-----	---	---	---
0340:										
Shuttle-----	---	---	---	---	---	---	-----	---	---	---
Hardhat-----	---	---	---	---	---	---	-----	---	---	---
Shuttle-----	---	---	---	---	---	---	-----	---	---	---
0350:										
Jericho-----	---	---	---	---	---	---	-----	---	---	---
Jericho-----	---	---	---	---	---	---	-----	---	---	---
0351:										
Shabliss-----	---	---	---	---	---	---	-----	---	---	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
Eastwell-----	---	---	---	---	---	---	-----	---	---	---
0355:										
Shabliss-----	---	---	---	---	---	---	-----	---	---	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
0370:										
Toano-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber m3/ha	
Tulase-----	---	---	---	---	---	---	-----	---	---	---
0371: Linoyer-----	---	---	---	---	---	---	-----	---	---	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
0373: Timpie-----	---	---	---	---	---	---	-----	---	---	---
Piltown-----	---	---	---	---	---	---	-----	---	---	---
Linoyer-----	---	---	---	---	---	---	-----	---	---	---
0374: Heist-----	---	---	---	---	---	---	-----	---	---	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
Zerk-----	---	---	---	---	---	---	-----	---	---	---
0375: Toano-----	---	---	---	---	---	---	-----	---	---	---
Heist-----	---	---	---	---	---	---	-----	---	---	---
0380: Cobre-----	---	---	---	---	---	---	-----	---	---	---
Izar-----	---	---	---	---	---	---	-----	---	---	---
Jackpot-----	---	---	---	---	---	---	-----	---	---	---
0381: Cobre-----	---	---	---	---	---	---	-----	---	---	---
Hundraw-----	1D	Moderate	Moderate	Moderate	Slight	Moderate	Utah juniper-----	59	1	---
Jackpot-----	---	---	---	---	---	---	-----	---	---	---
0382: Cobre-----	---	---	---	---	---	---	-----	---	---	---
Enko-----	---	---	---	---	---	---	-----	---	---	---
0390: Hardol-----	---	---	---	---	---	---	-----	---	---	---
Muiral-----	5R	Moderate	Severe	Moderate	Slight	Moderate	limber pine----- white fir-----	43	5	---
Rubble Land-----	---	---	---	---	---	---	-----	---	---	---
0392: Hardol-----	---	---	---	---	---	---	-----	---	---	---
Muiral-----	5R	Moderate	Severe	Moderate	Slight	Moderate	limber pine----- white fir-----	43	5	---
Onkeyo-----	---	---	---	---	---	---	-----	---	---	---
0400: Cleavage-----	---	---	---	---	---	---	-----	---	---	---
Cleavage-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordi- nation symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equip- ment limita- tion	Seedling mortal- ity	Wind- throw hazard	Plant competi- tion	Common trees	Site index	Volume of wood fiber m3/ha	
Sumine-----	---	---	---	---	---	---	-----	---	---	---
410: Jericho-----	---	---	---	---	---	---	-----	---	---	---
411: Jericho-----	---	---	---	---	---	---	-----	---	---	---
Armespan-----	---	---	---	---	---	---	-----	---	---	---
0420: Palinor-----	---	---	---	---	---	---	-----	---	---	---
Palinor-----	---	---	---	---	---	---	-----	---	---	---
0421: Palinor-----	---	---	---	---	---	---	-----	---	---	---
Automal-----	---	---	---	---	---	---	-----	---	---	---
0422: Palinor-----	---	---	---	---	---	---	-----	---	---	---
Zimbob-----	---	---	---	---	---	---	-----	---	---	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
0424: Palinor-----	---	---	---	---	---	---	-----	---	---	---
Hundraw-----	OD	Moderate	Moderate	Moderate	Slight	Moderate	Utah juniper-----	18	0	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
0426: Palinor-----	---	---	---	---	---	---	-----	---	---	---
Automal-----	---	---	---	---	---	---	-----	---	---	---
Wintermute-----	---	---	---	---	---	---	-----	---	---	---
0429: Palinor-----	---	---	---	---	---	---	-----	---	---	---
Automal-----	---	---	---	---	---	---	-----	---	---	---
Palinor-----	OF	Slight	Slight	Moderate	Slight	Slight	Utah juniper-----	20	0	---
0430: Graley-----	---	---	---	---	---	---	-----	---	---	---
Flocha-----	OR	Moderate	Severe	Moderate	Slight	Slight	Utah juniper-----	20	0	---
							singleleaf pinyon---	20	0	---
Cropper-----	OR	Severe	Severe	Moderate	Slight	Slight	singleleaf pinyon---	50	0	---
0431: Graley-----	---	---	---	---	---	---	-----	---	---	---
Chen-----	---	---	---	---	---	---	-----	---	---	---
McIvey-----	---	---	---	---	---	---	-----	---	---	---
0440: Lomoine-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									m3/ha	
Bijorja-----	---	---	---	---	---	---	-----	---	---	---
Lemoine-----	---	---	---	---	---	---	-----	---	---	---
0460:										
Okan-----	---	---	---	---	---	---	-----	---	---	---
Automal-----	---	---	---	---	---	---	-----	---	---	---
Hundraw-----	---	---	---	---	---	---	-----	---	---	---
0470:										
Rozara-----	---	---	---	---	---	---	-----	---	---	---
Cucamungo-----	1R	Moderate	Severe	Moderate	Slight	Moderate	singleleaf pinyon---	75	1	---
Rock Outcrop----	---	---	---	---	---	---	-----	---	---	---
0471:										
Cucamungo-----	OR	Moderate	Severe	Moderate	Slight	Moderate	Utah juniper-----	54	0	Utah juniper, singleleaf pinyon
							singleleaf pinyon---	54	0	
Hendap-----	OR	Moderate	Severe	Moderate	Slight	Moderate	Utah juniper-----	45	0	---
							singleleaf pinyon---	45	0	
Rock Outcrop----	---	---	---	---	---	---	-----	---	---	---
0480:										
Shabliss-----	---	---	---	---	---	---	-----	---	---	---
Palinor-----	---	---	---	---	---	---	-----	---	---	---
0485:										
Shabliss-----	---	---	---	---	---	---	-----	---	---	---
Parisa-----	---	---	---	---	---	---	-----	---	---	---
Hunnton-----	---	---	---	---	---	---	-----	---	---	---
0490:										
Wintermute-----	---	---	---	---	---	---	-----	---	---	---
Automal-----	---	---	---	---	---	---	-----	---	---	---
0492:										
Wintermute-----	---	---	---	---	---	---	-----	---	---	---
Peeko-----	---	---	---	---	---	---	-----	---	---	---
Hundraw-----	---	---	---	---	---	---	-----	---	---	---
0494:										
Wintermute-----	---	---	---	---	---	---	-----	---	---	---
Pyrat-----	---	---	---	---	---	---	-----	---	---	---
Automal-----	---	---	---	---	---	---	-----	---	---	---
0496:										
Sodhouse-----	---	---	---	---	---	---	-----	---	---	---
Sodhouse-----	---	---	---	---	---	---	-----	---	---	---
Linoyer-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordi- nation symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equip- ment limita- tion	Seedling mortal- ity	Wind- throw hazard	Plant competi- tion	Common trees	Site index	Volume of wood fiber m3/ha	
0497:										
Sodhouse-----	---	---	---	---	---	---	-----	---	---	---
Sodhouse-----	---	---	---	---	---	---	-----	---	---	---
Palinor-----	---	---	---	---	---	---	-----	---	---	---
0501:										
Pharo-----	---	---	---	---	---	---	-----	---	---	---
Izar-----	---	---	---	---	---	---	-----	---	---	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
0503:										
Automal-----	---	---	---	---	---	---	-----	---	---	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
Wintermute-----	---	---	---	---	---	---	-----	---	---	---
0504:										
Automal-----	---	---	---	---	---	---	-----	---	---	---
Wintermute-----	---	---	---	---	---	---	-----	---	---	---
0510:										
Adobe-----	---	---	---	---	---	---	-----	---	---	---
Hardzem-----	5R	Severe	Severe	Severe	Moderate	Slight	white fir-----	41	5	---
Haunchee-----	---	---	---	---	---	---	-----	---	---	---
0511:										
Adobe-----	---	---	---	---	---	---	-----	---	---	---
Wardbay-----	---	---	---	---	---	---	-----	---	---	---
Hardol-----	---	---	---	---	---	---	-----	---	---	---
0512:										
Adobe-----	---	---	---	---	---	---	-----	---	---	---
Cavehill-----	0R	Severe	Severe	Moderate	Slight	Severe	singleleaf pinyon---	55	0	---
Wardbay-----	---	---	---	---	---	---	-----	---	---	---
0520:										
Haunchee-----	---	---	---	---	---	---	-----	---	---	---
Muiral-----	6R	Severe	Severe	Moderate	Moderate	Slight	Engelmann's spruce--	84	6	---
Wardbay-----	---	---	---	---	---	---	-----	---	---	---
0530:										
Wardbay-----	---	---	---	---	---	---	-----	---	---	---
Adobe-----	---	---	---	---	---	---	-----	---	---	---
Haunchee-----	---	---	---	---	---	---	-----	---	---	---
0532:										
Onkeyo-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Common trees	Site index	Volume of wood fiber m3/ha	
Pookaloo-----	OD	Moderate	Moderate	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	20 20	0 0	---
Tecomar-----	---	---	---	---	---	---	-----	---	---	---
0540: Kunzler-----	---	---	---	---	---	---	-----	---	---	---
Sycomat-----	---	---	---	---	---	---	-----	---	---	---
0541: Kunzler-----	---	---	---	---	---	---	-----	---	---	---
Sheffit-----	---	---	---	---	---	---	-----	---	---	---
0550: Urmafot-----	---	---	---	---	---	---	-----	---	---	---
Bobs-----	---	---	---	---	---	---	-----	---	---	---
Urmafot-----	OR	Severe	Severe	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	25 25	0 0	---
0551: Urmafot-----	---	---	---	---	---	---	-----	---	---	---
Bobs-----	---	---	---	---	---	---	-----	---	---	---
552: Urmafot-----	---	---	---	---	---	---	-----	---	---	---
Pharo-----	---	---	---	---	---	---	-----	---	---	---
0554: Urmafot-----	---	---	---	---	---	---	-----	---	---	---
Tecomar-----	---	---	---	---	---	---	-----	---	---	---
Urmafot-----	OR	Severe	Severe	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	25 25	0 0	---
0561: Palinor-----	---	---	---	---	---	---	-----	---	---	---
Urmafot-----	---	---	---	---	---	---	-----	---	---	---
Palinor-----	---	---	---	---	---	---	-----	---	---	---
0562: Bobs-----	---	---	---	---	---	---	-----	---	---	---
0563: Bobs-----	---	---	---	---	---	---	-----	---	---	---
Pyrat-----	---	---	---	---	---	---	-----	---	---	---
0575: Pookaloo-----	OR	Severe	Severe	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	20 20	0 0	---
Cavehill-----	OR	Severe	Severe	Moderate	Slight	Severe	singleleaf pinyon---	55	0	---
Rock Outcrop----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordi- nation symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equip- ment limita- tion	Seedling mortal- ity	Wind- throw hazard	Plant competi- tion	Common trees	Site index	Volume of wood fiber m3/ha	
0576:										
Pockaloo-----	OR	Severe	Severe	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	20 20	0 0	---
Tecomar-----	---	---	---	---	---	---	-----	---	---	---
Onkeyo-----	---	---	---	---	---	---	-----	---	---	---
0582:										
Sheffit-----	---	---	---	---	---	---	-----	---	---	---
Sheffit-----	---	---	---	---	---	---	-----	---	---	---
Katelana-----	---	---	---	---	---	---	-----	---	---	---
0590:										
Upatad-----	OR	Severe	Severe	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	20 20	0 0	---
Segura-----	---	---	---	---	---	---	-----	---	---	---
0600:										
Onkeyo-----	---	---	---	---	---	---	-----	---	---	---
Amene-----	---	---	---	---	---	---	-----	---	---	---
Pockaloo-----	OR	Severe	Severe	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	20 20	0 0	---
0610:										
Wintermute-----	---	---	---	---	---	---	-----	---	---	---
Eastwell-----	---	---	---	---	---	---	-----	---	---	---
0614:										
Wintermute-----	---	---	---	---	---	---	-----	---	---	---
Eastwell-----	---	---	---	---	---	---	-----	---	---	---
Zerk-----	---	---	---	---	---	---	-----	---	---	---
0617:										
Wintermute-----	---	---	---	---	---	---	-----	---	---	---
Zerk-----	---	---	---	---	---	---	-----	---	---	---
Loray-----	---	---	---	---	---	---	-----	---	---	---
0620:										
Atlow-----	---	---	---	---	---	---	-----	---	---	---
Atlow-----	---	---	---	---	---	---	-----	---	---	---
0631:										
Eastwell-----	---	---	---	---	---	---	-----	---	---	---
Wintermute-----	---	---	---	---	---	---	-----	---	---	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
0632:										
Eastwell-----	---	---	---	---	---	---	-----	---	---	---
Zafod-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									m3/ha	
0634:										
Eastwell-----	---	---	---	---	---	---	-----	---	---	---
Shabliss-----	---	---	---	---	---	---	-----	---	---	---
Izar-----	---	---	---	---	---	---	-----	---	---	---
0636:										
Eastwell-----	---	---	---	---	---	---	-----	---	---	---
Hundraw-----	OD	Slight	Slight	Moderate	Slight	Moderate	Utah juniper-----	18	0	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
0650:										
Mizpah-----	---	---	---	---	---	---	-----	---	---	---
Zerk-----	---	---	---	---	---	---	-----	---	---	---
Wintermute-----	---	---	---	---	---	---	-----	---	---	---
0671:										
Idway-----	---	---	---	---	---	---	-----	---	---	---
Mysol-----	---	---	---	---	---	---	-----	---	---	---
0672:										
Idway-----	---	---	---	---	---	---	-----	---	---	---
James Canyon-----	---	---	---	---	---	---	-----	---	---	---
0680:										
Simon-----	---	---	---	---	---	---	-----	---	---	---
Graley-----	---	---	---	---	---	---	-----	---	---	---
Chen-----	---	---	---	---	---	---	-----	---	---	---
0691:										
Tarnach-----	---	---	---	---	---	---	-----	---	---	---
Tarnach-----	---	---	---	---	---	---	-----	---	---	---
Wesfil-----	---	---	---	---	---	---	-----	---	---	---
0692:										
Tarnach-----	---	---	---	---	---	---	-----	---	---	---
Upatad-----	---	---	---	---	---	---	-----	---	---	---
Wesfil-----	---	---	---	---	---	---	-----	---	---	---
0700:										
Shabliss-----	---	---	---	---	---	---	-----	---	---	---
Tulase-----	---	---	---	---	---	---	-----	---	---	---
Linoeyer-----	---	---	---	---	---	---	-----	---	---	---
0720:										
Mysol-----	---	---	---	---	---	---	-----	---	---	---
Mysol-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									m3/ha	
0730:										
Idway-----	---	---	---	---	---	---	-----	---	---	---
Kawich-----	---	---	---	---	---	---	-----	---	---	---
Mysol-----	---	---	---	---	---	---	-----	---	---	---
0733:										
Idway-----	---	---	---	---	---	---	-----	---	---	---
Idway-----	---	---	---	---	---	---	-----	---	---	---
Mysol-----	---	---	---	---	---	---	-----	---	---	---
0740:										
Upatad-----	OR	Slight	Severe	Moderate	Slight	Moderate	Utah juniper----- singleleaf pinyon---	40	0	---
Pioche-----	OR	Moderate	Severe	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	20 20	0 0	---
Tarnach-----	---	---	---	---	---	---	-----	---	---	---
0760:										
Playas-----	---	---	---	---	---	---	-----	---	---	---
0761:										
Umberland-----	---	---	---	---	---	---	-----	---	---	---
Umberland-----	---	---	---	---	---	---	-----	---	---	---
0762:										
Umberland-----	---	---	---	---	---	---	-----	---	---	---
Playas-----	---	---	---	---	---	---	-----	---	---	---
0763:										
Equis-----	---	---	---	---	---	---	-----	---	---	---
Umberland-----	---	---	---	---	---	---	-----	---	---	---
Duffer-----	---	---	---	---	---	---	-----	---	---	---
0764:										
Umberland-----	---	---	---	---	---	---	-----	---	---	---
Rubylake-----	---	---	---	---	---	---	-----	---	---	---
Orupa-----	---	---	---	---	---	---	-----	---	---	---
0765:										
Umberland-----	---	---	---	---	---	---	-----	---	---	---
Umberland-----	---	---	---	---	---	---	-----	---	---	---
Wendane-----	---	---	---	---	---	---	-----	---	---	---
0767:										
Umberland-----	---	---	---	---	---	---	-----	---	---	---
Umberland-----	---	---	---	---	---	---	-----	---	---	---
Orupa-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber m3/ha	
0781:										
Mysol-----	---	---	---	---	---	---	-----	---	---	---
Benin-----	---	---	---	---	---	---	-----	---	---	---
Wendane-----	---	---	---	---	---	---	-----	---	---	---
0800:										
Mazuma-----	---	---	---	---	---	---	-----	---	---	---
Toano-----	---	---	---	---	---	---	-----	---	---	---
0801:										
Mazuma-----	---	---	---	---	---	---	-----	---	---	---
Zerk-----	---	---	---	---	---	---	-----	---	---	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
0804:										
Mazuma-----	---	---	---	---	---	---	-----	---	---	---
Kawich-----	---	---	---	---	---	---	-----	---	---	---
Playas-----	---	---	---	---	---	---	-----	---	---	---
0807:										
Mazuma-----	---	---	---	---	---	---	-----	---	---	---
Kunzler-----	---	---	---	---	---	---	-----	---	---	---
Zerk-----	---	---	---	---	---	---	-----	---	---	---
0823:										
Kunzler-----	---	---	---	---	---	---	-----	---	---	---
Pyrat-----	---	---	---	---	---	---	-----	---	---	---
Blimo-----	---	---	---	---	---	---	-----	---	---	---
0824:										
Kunzler-----	---	---	---	---	---	---	-----	---	---	---
Katelana-----	---	---	---	---	---	---	-----	---	---	---
0827:										
Kunzler-----	---	---	---	---	---	---	-----	---	---	---
James Canyon----	---	---	---	---	---	---	-----	---	---	---
James Canyon----	---	---	---	---	---	---	-----	---	---	---
0828:										
Kunzler-----	---	---	---	---	---	---	-----	---	---	---
Pyrat-----	---	---	---	---	---	---	-----	---	---	---
Wendane-----	---	---	---	---	---	---	-----	---	---	---
0830:										
Pharo-----	---	---	---	---	---	---	-----	---	---	---
Kzin-----	OR	Moderate	Severe	Severe	Slight	Moderate	Utah juniper-----	37	0	---
							singleleaf pinyon---	37	0	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordi- nation symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equip- ment limita- tion	Seedling mortal- ity	Wind- throw hazard	Plant competi- tion	Common trees	Site index	Volume of wood fiber	
									m3/ha	
Pharo-----	---	---	---	---	---	---	-----	---	---	---
0842: Katelana-----	---	---	---	---	---	---	-----	---	---	---
Timpie-----	---	---	---	---	---	---	-----	---	---	---
0843: Katelana-----	---	---	---	---	---	---	-----	---	---	---
Kawich-----	---	---	---	---	---	---	-----	---	---	---
0845: Katelana-----	---	---	---	---	---	---	-----	---	---	---
Ragtown-----	---	---	---	---	---	---	-----	---	---	---
Timpie-----	---	---	---	---	---	---	-----	---	---	---
0847: Mazuma-----	---	---	---	---	---	---	-----	---	---	---
Blimo-----	---	---	---	---	---	---	-----	---	---	---
Wintermute-----	---	---	---	---	---	---	-----	---	---	---
0850: Palinor-----	---	---	---	---	---	---	-----	---	---	---
Wintermute-----	---	---	---	---	---	---	-----	---	---	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
0851: Palinor-----	---	---	---	---	---	---	-----	---	---	---
Zimbob-----	---	---	---	---	---	---	-----	---	---	---
Tecomar-----	---	---	---	---	---	---	-----	---	---	---
0852: Palinor-----	---	---	---	---	---	---	-----	---	---	---
Pyrat-----	---	---	---	---	---	---	-----	---	---	---
Shabliss-----	---	---	---	---	---	---	-----	---	---	---
0854: Palinor-----	---	---	---	---	---	---	-----	---	---	---
Automal-----	---	---	---	---	---	---	-----	---	---	---
Shabliss-----	---	---	---	---	---	---	-----	---	---	---
0856: Palinor-----	---	---	---	---	---	---	-----	---	---	---
Parisa-----	---	---	---	---	---	---	-----	---	---	---
0857: Palinor-----	---	---	---	---	---	---	-----	---	---	---
Shabliss-----	---	---	---	---	---	---	-----	---	---	---
Linoyer-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber m3/ha	
0858:										
Palinor-----	---	---	---	---	---	---	-----	---	---	---
Automal-----	---	---	---	---	---	---	-----	---	---	---
Linoyer-----	---	---	---	---	---	---	-----	---	---	---
0870:										
Theriot-----	---	---	---	---	---	---	-----	---	---	---
Zimbob-----	---	---	---	---	---	---	-----	---	---	---
0880:										
Duffer-----	---	---	---	---	---	---	-----	---	---	---
Duffer-----	---	---	---	---	---	---	-----	---	---	---
Kolda-----	---	---	---	---	---	---	-----	---	---	---
0881:										
Duffer-----	---	---	---	---	---	---	-----	---	---	---
Kunzler-----	---	---	---	---	---	---	-----	---	---	---
0882:										
Duffer-----	---	---	---	---	---	---	-----	---	---	---
Kolda-----	---	---	---	---	---	---	-----	---	---	---
0894:										
Zerk-----	---	---	---	---	---	---	-----	---	---	---
Threesee-----	---	---	---	---	---	---	-----	---	---	---
Mazuma-----	---	---	---	---	---	---	-----	---	---	---
0900:										
Zerk-----	---	---	---	---	---	---	-----	---	---	---
Automal-----	---	---	---	---	---	---	-----	---	---	---
Linoyer-----	---	---	---	---	---	---	-----	---	---	---
0910:										
Ragtown-----	---	---	---	---	---	---	-----	---	---	---
Ragtown-----	---	---	---	---	---	---	-----	---	---	---
0912:										
Katelana-----	---	---	---	---	---	---	-----	---	---	---
Katelana-----	---	---	---	---	---	---	-----	---	---	---
0914:										
Katelana-----	---	---	---	---	---	---	-----	---	---	---
Benin-----	---	---	---	---	---	---	-----	---	---	---
Sheffit-----	---	---	---	---	---	---	-----	---	---	---
0917:										
Katelana-----	---	---	---	---	---	---	-----	---	---	---
Sheffit-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									m3/ha	
Ragtown-----	---	---	---	---	---	---	-----	---	---	---
0918: Katelana-----	---	---	---	---	---	---	-----	---	---	---
Zorravista-----	---	---	---	---	---	---	-----	---	---	---
Playas-----	---	---	---	---	---	---	-----	---	---	---
0930: Okan-----	---	---	---	---	---	---	-----	---	---	---
Toano-----	---	---	---	---	---	---	-----	---	---	---
Loray-----	---	---	---	---	---	---	-----	---	---	---
0932: Okan-----	---	---	---	---	---	---	-----	---	---	---
Pyrat-----	---	---	---	---	---	---	-----	---	---	---
0941: Sheffit-----	---	---	---	---	---	---	-----	---	---	---
Sheffit-----	---	---	---	---	---	---	-----	---	---	---
Zorravista-----	---	---	---	---	---	---	-----	---	---	---
0943: Sheffit-----	---	---	---	---	---	---	-----	---	---	---
Umberland-----	---	---	---	---	---	---	-----	---	---	---
0960: Gravier-----	---	---	---	---	---	---	-----	---	---	---
Zerk-----	---	---	---	---	---	---	-----	---	---	---
0961: Gravier-----	---	---	---	---	---	---	-----	---	---	---
Piltown-----	---	---	---	---	---	---	-----	---	---	---
Zerk-----	---	---	---	---	---	---	-----	---	---	---
0972: Zimbob-----	---	---	---	---	---	---	-----	---	---	---
Zimbob-----	---	---	---	---	---	---	-----	---	---	---
Pookaloo-----	OR	Severe	Severe	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	20 20	0 0	---
0974: Zimbob-----	---	---	---	---	---	---	-----	---	---	---
Tecomar-----	---	---	---	---	---	---	-----	---	---	---
Pookaloo-----	OD	Moderate	Moderate	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	20 20	0 0	---
0975: Zimbob-----	---	---	---	---	---	---	-----	---	---	---
Tecomar-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									m3/ha	
Tecomar-----	---	---	---	---	---	---	-----	---	---	---
0980: Onkeyo-----	---	---	---	---	---	---	-----	---	---	---
Pockaloo-----	OR	Severe	Severe	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	20 20	0 0	---
Zimbob-----	---	---	---	---	---	---	-----	---	---	---
0990: Hyzen-----	---	---	---	---	---	---	-----	---	---	---
Zimbob-----	---	---	---	---	---	---	-----	---	---	---
0991: Hyzen-----	OR	Severe	Severe	Moderate	Slight	---	Utah juniper----- singleleaf pinyon---	20 20	0 0	---
Cavehill-----	OR	Severe	Severe	Moderate	Slight	Severe	singleleaf pinyon---	55	0	---
Tecomar-----	---	---	---	---	---	---	-----	---	---	---
1000: Pyrat-----	---	---	---	---	---	---	-----	---	---	---
Zerk-----	---	---	---	---	---	---	-----	---	---	---
1001: Pyrat-----	---	---	---	---	---	---	-----	---	---	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
Eastwell-----	---	---	---	---	---	---	-----	---	---	---
1002: Threesee-----	---	---	---	---	---	---	-----	---	---	---
Kunzler-----	---	---	---	---	---	---	-----	---	---	---
Threesee-----	---	---	---	---	---	---	-----	---	---	---
1003: Pyrat-----	---	---	---	---	---	---	-----	---	---	---
Hundraw-----	OD	Moderate	Moderate	Moderate	Slight	Moderate	Utah juniper-----	18	0	---
Tulase-----	---	---	---	---	---	---	-----	---	---	---
1004: Pyrat-----	---	---	---	---	---	---	-----	---	---	---
Parisa-----	---	---	---	---	---	---	-----	---	---	---
Tulase-----	---	---	---	---	---	---	-----	---	---	---
1005: Pyrat-----	---	---	---	---	---	---	-----	---	---	---
Zerk-----	---	---	---	---	---	---	-----	---	---	---
Parisa-----	---	---	---	---	---	---	-----	---	---	---
1006: Pyrat-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									m3/ha	
Blimo-----	---	---	---	---	---	---	-----	---	---	---
1007: Pyrat-----	---	---	---	---	---	---	-----	---	---	---
Parisa-----	---	---	---	---	---	---	-----	---	---	---
Automal-----	---	---	---	---	---	---	-----	---	---	---
1009: Pyrat-----	---	---	---	---	---	---	-----	---	---	---
Tulase-----	---	---	---	---	---	---	-----	---	---	---
Wintermute-----	---	---	---	---	---	---	-----	---	---	---
1020: Okan-----	---	---	---	---	---	---	-----	---	---	---
Eastwell-----	---	---	---	---	---	---	-----	---	---	---
Blimo-----	---	---	---	---	---	---	-----	---	---	---
1023: Okan-----	---	---	---	---	---	---	-----	---	---	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
Katelana-----	---	---	---	---	---	---	-----	---	---	---
1030: Segura-----	---	---	---	---	---	---	-----	---	---	---
Bullump-----	---	---	---	---	---	---	-----	---	---	---
Hutchley-----	---	---	---	---	---	---	-----	---	---	---
1040: Segura-----	---	---	---	---	---	---	-----	---	---	---
Pioche-----	OX	Moderate	Moderate	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	20 20	0 0	---
Chen-----	---	---	---	---	---	---	-----	---	---	---
1061: Pioche-----	OR	Moderate	Severe	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	20 20	0 0	---
Cucamungo-----	OR	Moderate	Severe	Moderate	Slight	Moderate	Utah juniper----- singleleaf pinyon---	54 54	0 0	Utah juniper, singleleaf pinyon
Rock Outcrop---	---	---	---	---	---	---	-----	---	---	---
1070: Zafod-----	---	---	---	---	---	---	-----	---	---	---
Automal-----	---	---	---	---	---	---	-----	---	---	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
1080: Cotant-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordi- nation symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equip- ment limita- tion	Seedling mortal- ity	Wind- throw hazard	Plant competi- tion	Common trees	Site index	Volume of wood fiber	
									m3/ha	
Segura-----	---	---	---	---	---	---	-----	---	---	---
1111: Parisa-----	---	---	---	---	---	---	-----	---	---	---
1120: Okan-----	---	---	---	---	---	---	-----	---	---	---
Automal-----	---	---	---	---	---	---	-----	---	---	---
1150: Adobe-----	---	---	---	---	---	---	-----	---	---	---
Wardbay-----	---	---	---	---	---	---	-----	---	---	---
Haunchee-----	---	---	---	---	---	---	-----	---	---	---
1161: Pharo-----	---	---	---	---	---	---	-----	---	---	---
Bobs-----	---	---	---	---	---	---	-----	---	---	---
Pookaloo-----	OR	Severe	Severe	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	20 20	0 0	---
1171: Pyrat-----	---	---	---	---	---	---	-----	---	---	---
Automal-----	---	---	---	---	---	---	-----	---	---	---
Gravier-----	---	---	---	---	---	---	-----	---	---	---
1172: Pyrat-----	---	---	---	---	---	---	-----	---	---	---
Automal-----	---	---	---	---	---	---	-----	---	---	---
Automal-----	---	---	---	---	---	---	-----	---	---	---
1173: Pyrat-----	---	---	---	---	---	---	-----	---	---	---
Automal-----	---	---	---	---	---	---	-----	---	---	---
1174: Pyrat-----	---	---	---	---	---	---	-----	---	---	---
Tosser-----	---	---	---	---	---	---	-----	---	---	---
1180: Haunchee-----	---	---	---	---	---	---	-----	---	---	---
Cavehill-----	OR	Severe	Severe	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	35 35	0 0	---
1181: Haunchee-----	---	---	---	---	---	---	-----	---	---	---
Halacan-----	---	---	---	---	---	---	-----	---	---	---
Wardbay-----	---	---	---	---	---	---	-----	---	---	---
1190: Upatad-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									m3/ha	
Atlow-----	---	---	---	---	---	---	-----	---	---	---
Upatad-----	OR	Slight	Severe	Moderate	Slight	Moderate	Utah juniper----- singleleaf pinyon---	40	0	---
1191: Upatad-----	---	---	---	---	---	---	-----	---	---	---
Pioche-----	OR	Moderate	Severe	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	20 20	0 0	---
Rock Outcrop---	---	---	---	---	---	---	-----	---	---	---
1200: Hardol-----	---	---	---	---	---	---	-----	---	---	---
Hardzem-----	5R	Severe	Severe	Severe	Moderate	Slight	white fir-----	41	5	---
Rock Outcrop---	---	---	---	---	---	---	-----	---	---	---
1201: Hardol-----	---	---	---	---	---	---	-----	---	---	---
Rock Outcrop---	---	---	---	---	---	---	-----	---	---	---
Wardbay-----	---	---	---	---	---	---	-----	---	---	---
1210: Blimo-----	---	---	---	---	---	---	-----	---	---	---
Kunzler-----	---	---	---	---	---	---	-----	---	---	---
Linoyer-----	---	---	---	---	---	---	-----	---	---	---
1213: Blimo-----	---	---	---	---	---	---	-----	---	---	---
Threesee-----	---	---	---	---	---	---	-----	---	---	---
1215: Blimo-----	---	---	---	---	---	---	-----	---	---	---
Zorravista-----	---	---	---	---	---	---	-----	---	---	---
1216: Blimo-----	---	---	---	---	---	---	-----	---	---	---
Idway-----	---	---	---	---	---	---	-----	---	---	---
Mazuma-----	---	---	---	---	---	---	-----	---	---	---
1220: Onkeyo-----	---	---	---	---	---	---	-----	---	---	---
Adobe-----	---	---	---	---	---	---	-----	---	---	---
Pockaloo-----	OR	Severe	Severe	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	20 20	0 0	---
1230: Hardzem-----	5R	Severe	Severe	Severe	Moderate	Slight	white fir-----	41	5	---
Haunchee-----	---	---	---	---	---	---	-----	---	---	---
Wardbay-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									m3/ha	
1240:										
Benin-----	---	---	---	---	---	---	-----	---	---	---
Benin-----	---	---	---	---	---	---	-----	---	---	---
1241:										
Benin-----	---	---	---	---	---	---	-----	---	---	---
Playas-----	---	---	---	---	---	---	-----	---	---	---
Benin-----	---	---	---	---	---	---	-----	---	---	---
1250:										
Tecomar-----	---	---	---	---	---	---	-----	---	---	---
Pookaloo-----	OR	Severe	Severe	Moderate	Slight	Slight	Utah juniper-----	20	0	---
							singleleaf pinyon---	20	0	---
1270:										
Katelana-----	---	---	---	---	---	---	-----	---	---	---
Sheffit-----	---	---	---	---	---	---	-----	---	---	---
1271:										
Uvada-----	---	---	---	---	---	---	-----	---	---	---
Ragtown-----	---	---	---	---	---	---	-----	---	---	---
1272:										
Katelana-----	---	---	---	---	---	---	-----	---	---	---
Kawich-----	---	---	---	---	---	---	-----	---	---	---
1280:										
Sycomat-----	---	---	---	---	---	---	-----	---	---	---
Kunzler-----	---	---	---	---	---	---	-----	---	---	---
1281:										
Sycomat-----	---	---	---	---	---	---	-----	---	---	---
Mazuma-----	---	---	---	---	---	---	-----	---	---	---
1290:										
Heist-----	---	---	---	---	---	---	-----	---	---	---
Blimo-----	---	---	---	---	---	---	-----	---	---	---
1300:										
Cavehill-----	1D	Severe	Severe	Moderate	Slight	Slight	singleleaf pinyon---	60	1	---
Haunchee-----	---	---	---	---	---	---	-----	---	---	---
Hardzem-----	5R	Severe	Severe	Severe	Moderate	Slight	white fir-----	41	5	---
1360:										
Toba-----	---	---	---	---	---	---	-----	---	---	---
Appian-----	---	---	---	---	---	---	-----	---	---	---
1370:										
Orupa-----	---	---	---	---	---	---	-----	---	---	---
Playas-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber m3/ha	
Boofuss-----	---	---	---	---	---	---	-----	---	---	---
1380: Hulderman-----	---	---	---	---	---	---	-----	---	---	---
Toba-----	---	---	---	---	---	---	-----	---	---	---
Benin-----	---	---	---	---	---	---	-----	---	---	---
1390: Wendane-----	---	---	---	---	---	---	-----	---	---	---
Mysol-----	---	---	---	---	---	---	-----	---	---	---
Toba-----	---	---	---	---	---	---	-----	---	---	---
1410: Threesee-----	---	---	---	---	---	---	-----	---	---	---
Tosser-----	---	---	---	---	---	---	-----	---	---	---
1411: Threesee-----	---	---	---	---	---	---	-----	---	---	---
Lincyer-----	---	---	---	---	---	---	-----	---	---	---
Okan-----	---	---	---	---	---	---	-----	---	---	---
1412: Threesee-----	---	---	---	---	---	---	-----	---	---	---
Idway-----	---	---	---	---	---	---	-----	---	---	---
1413: Idway-----	---	---	---	---	---	---	-----	---	---	---
Zorravista-----	---	---	---	---	---	---	-----	---	---	---
Kunzler-----	---	---	---	---	---	---	-----	---	---	---
1414: Threesee-----	---	---	---	---	---	---	-----	---	---	---
Shantown-----	---	---	---	---	---	---	-----	---	---	---
Kunzler-----	---	---	---	---	---	---	-----	---	---	---
1430: Pockaloo-----	OR	Severe	Severe	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	20 20	0 0	---
Tecomar-----	---	---	---	---	---	---	-----	---	---	---
Rock Outcrop-----	---	---	---	---	---	---	-----	---	---	---
1440: Boofuss-----	---	---	---	---	---	---	-----	---	---	---
Boofuss-----	---	---	---	---	---	---	-----	---	---	---
Equis-----	---	---	---	---	---	---	-----	---	---	---
1441: Boofuss-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordi- nation symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equip- ment limita- tion	Seedling mortal- ity	Wind- throw hazard	Plant competi- tion	Common trees	Site index	Volume of wood fiber m3/ha	
Wendane-----	---	---	---	---	---	---	-----	---	---	---
Umberland-----	---	---	---	---	---	---	-----	---	---	---
1450: Piltown-----	---	---	---	---	---	---	-----	---	---	---
Kawich-----	---	---	---	---	---	---	-----	---	---	---
1460: Tosser-----	---	---	---	---	---	---	-----	---	---	---
Threesee-----	---	---	---	---	---	---	-----	---	---	---
1471: Timpie-----	---	---	---	---	---	---	-----	---	---	---
Kunzler-----	---	---	---	---	---	---	-----	---	---	---
Threesee-----	---	---	---	---	---	---	-----	---	---	---
1480: Tulase-----	---	---	---	---	---	---	-----	---	---	---
Linoyer-----	---	---	---	---	---	---	-----	---	---	---
1500: Tooele-----	---	---	---	---	---	---	-----	---	---	---
Loray-----	---	---	---	---	---	---	-----	---	---	---
1510: Izamatch-----	---	---	---	---	---	---	-----	---	---	---
Cliffdown-----	---	---	---	---	---	---	-----	---	---	---
1520: Izamatch-----	---	---	---	---	---	---	-----	---	---	---
Izamatch-----	---	---	---	---	---	---	-----	---	---	---
Luning-----	---	---	---	---	---	---	-----	---	---	---
1521: Izamatch-----	---	---	---	---	---	---	-----	---	---	---
Izamatch-----	---	---	---	---	---	---	-----	---	---	---
Theriot-----	---	---	---	---	---	---	-----	---	---	---
1522: Izamatch-----	---	---	---	---	---	---	-----	---	---	---
Smaug-----	---	---	---	---	---	---	-----	---	---	---
Badland-----	---	---	---	---	---	---	-----	---	---	---
1530: Theriot-----	---	---	---	---	---	---	-----	---	---	---
Theriot-----	---	---	---	---	---	---	-----	---	---	---
Izamatch-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									m3/ha	
1531:										
Theriot-----	---	---	---	---	---	---	-----	---	---	---
Izamatc-----	---	---	---	---	---	---	-----	---	---	---
Rock Outcrop---	---	---	---	---	---	---	-----	---	---	---
1532:										
Theriot-----	---	---	---	---	---	---	-----	---	---	---
Theriot-----	---	---	---	---	---	---	-----	---	---	---
Rock Outcrop---	---	---	---	---	---	---	-----	---	---	---
1540:										
Kyler-----	---	---	---	---	---	---	-----	---	---	---
Amtoft-----	---	---	---	---	---	---	-----	---	---	---
Amtoft-----	---	---	---	---	---	---	-----	---	---	---
1541:										
Kyler-----	---	---	---	---	---	---	-----	---	---	---
Kyler-----	---	---	---	---	---	---	-----	---	---	---
Rock Outcrop---	---	---	---	---	---	---	-----	---	---	---
1542:										
Kyler-----	---	---	---	---	---	---	-----	---	---	---
Amtoft-----	---	---	---	---	---	---	-----	---	---	---
Jericho-----	---	---	---	---	---	---	-----	---	---	---
1550:										
Jericho-----	---	---	---	---	---	---	-----	---	---	---
Jericho-----	---	---	---	---	---	---	-----	---	---	---
1560:										
Toano-----	---	---	---	---	---	---	-----	---	---	---
Timpie-----	---	---	---	---	---	---	-----	---	---	---
1570:										
Jericho-----	---	---	---	---	---	---	-----	---	---	---
Xeric Torriorthents--	---	---	---	---	---	---	-----	---	---	---
1580:										
Armespan-----	---	---	---	---	---	---	-----	---	---	---
Jericho-----	---	---	---	---	---	---	-----	---	---	---
1581:										
Armespan-----	---	---	---	---	---	---	-----	---	---	---
Kyler-----	---	---	---	---	---	---	-----	---	---	---
Haist-----	---	---	---	---	---	---	-----	---	---	---
1582:										
Armespan-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									m3/ha	
Xeric Torriorthents--	---	---	---	---	---	---	-----	---	---	---
1590: Luning-----	---	---	---	---	---	---	-----	---	---	---
Luning-----	---	---	---	---	---	---	-----	---	---	---
Loray-----	---	---	---	---	---	---	-----	---	---	---
1591: Luning-----	---	---	---	---	---	---	-----	---	---	---
Izamatch-----	---	---	---	---	---	---	-----	---	---	---
Badland-----	---	---	---	---	---	---	-----	---	---	---
1600: Eaglepass-----	---	---	---	---	---	---	-----	---	---	---
Antoft-----	---	---	---	---	---	---	-----	---	---	---
1610: Xeric Torriorthents--	---	---	---	---	---	---	-----	---	---	---
Armespan-----	---	---	---	---	---	---	-----	---	---	---
Badland-----	---	---	---	---	---	---	-----	---	---	---
1620: Kolda-----	---	---	---	---	---	---	-----	---	---	---
Duffer-----	---	---	---	---	---	---	-----	---	---	---
Sonoma-----	---	---	---	---	---	---	-----	---	---	---
1621: Kolda-----	---	---	---	---	---	---	-----	---	---	---
Rubylake-----	---	---	---	---	---	---	-----	---	---	---
Kolda-----	---	---	---	---	---	---	-----	---	---	---
1622: Kolda-----	---	---	---	---	---	---	-----	---	---	---
1623: Kolda-----	---	---	---	---	---	---	-----	---	---	---
Water-----	---	---	---	---	---	---	-----	---	---	---
1630: Pookaloo-----	OR	Severe	Severe	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	20 20	0 0	---
Cavehill-----	OR	Severe	Severe	Moderate	Slight	Severe	singleleaf pinyon---	55	0	---
Rock Outcrop----	---	---	---	---	---	---	-----	---	---	---
1631: Pookaloo-----	OR	Severe	Severe	Moderate	Slight	Slight	Utah juniper----- singleleaf pinyon---	20 20	0 0	---
Tecomar-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber	
									m3/ha	
Wardbay-----	---	---	---	---	---	---	-----	---	---	---
1640: Jungo-----	---	---	---	---	---	---	-----	---	---	---
Jungo-----	---	---	---	---	---	---	-----	---	---	---
1650: Shantown-----	---	---	---	---	---	---	-----	---	---	---
Zorravista-----	---	---	---	---	---	---	-----	---	---	---
1651: Shantown-----	---	---	---	---	---	---	-----	---	---	---
Shantown-----	---	---	---	---	---	---	-----	---	---	---
1660: Wendane-----	---	---	---	---	---	---	-----	---	---	---
Logan-----	---	---	---	---	---	---	-----	---	---	---
1670: Wendane-----	---	---	---	---	---	---	-----	---	---	---
Logan-----	---	---	---	---	---	---	-----	---	---	---
Wendane-----	---	---	---	---	---	---	-----	---	---	---
1680: Rubylake-----	---	---	---	---	---	---	-----	---	---	---
Kolda-----	---	---	---	---	---	---	-----	---	---	---
Wendane-----	---	---	---	---	---	---	-----	---	---	---
1681: Wendane-----	---	---	---	---	---	---	-----	---	---	---
Logan-----	---	---	---	---	---	---	-----	---	---	---
Umberland-----	---	---	---	---	---	---	-----	---	---	---
1690: Krenka-----	---	---	---	---	---	---	-----	---	---	---
Secrepass-----	---	---	---	---	---	---	-----	---	---	---
1700: Heechee-----	---	---	---	---	---	---	-----	---	---	---
Rubicity-----	---	---	---	---	---	---	-----	---	---	---
Heechee-----	---	---	---	---	---	---	-----	---	---	---
1702: Heechee-----	---	---	---	---	---	---	-----	---	---	---
McIvey-----	---	---	---	---	---	---	-----	---	---	---
Rubicity-----	---	---	---	---	---	---	-----	---	---	---
1710: James Canyon----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Wind-throw hazard	Plant competition	Common trees	Site index	Volume of wood fiber m3/ha	
Wendane-----	---	---	---	---	---	---	-----	---	---	---
1711: James Canyon----	---	---	---	---	---	---	-----	---	---	---
Wendane-----	---	---	---	---	---	---	-----	---	---	---
Wendane-----	---	---	---	---	---	---	-----	---	---	---
1720: Welch-----	---	---	---	---	---	---	-----	---	---	---
1721: Welch-----	---	---	---	---	---	---	-----	---	---	---
Welsum-----	---	---	---	---	---	---	-----	---	---	---
1722: Welch-----	---	---	---	---	---	---	-----	---	---	---
Slipback-----	---	---	---	---	---	---	-----	---	---	---
Welch-----	---	---	---	---	---	---	-----	---	---	---
1723: Welch-----	---	---	---	---	---	---	-----	---	---	---
Welch-----	---	---	---	---	---	---	-----	---	---	---
1730: McIvey-----	---	---	---	---	---	---	-----	---	---	---
Donna-----	---	---	---	---	---	---	-----	---	---	---
1731: McIvey-----	---	---	---	---	---	---	-----	---	---	---
Chen-----	---	---	---	---	---	---	-----	---	---	---
Donna-----	---	---	---	---	---	---	-----	---	---	---
1732: McIvey-----	---	---	---	---	---	---	-----	---	---	---
Stampede-----	---	---	---	---	---	---	-----	---	---	---
Heechee-----	---	---	---	---	---	---	-----	---	---	---
1740: Slipback-----	---	---	---	---	---	---	-----	---	---	---
Welch-----	---	---	---	---	---	---	-----	---	---	---
1741: Slipback-----	---	---	---	---	---	---	-----	---	---	---
Shantown-----	---	---	---	---	---	---	-----	---	---	---
Toba-----	---	---	---	---	---	---	-----	---	---	---
1750: Heechee-----	---	---	---	---	---	---	-----	---	---	---
Welch-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordi- nation symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equip- ment limita- tion	Seedling mortal- ity	Wind- throw hazard	Plant competi- tion	Common trees	Site index	Volume of wood fiber	
									m3/ha	
Welch-----	---	---	---	---	---	---	-----	---	---	---
1760: Lykal-----	---	---	---	---	---	---	-----	---	---	---
Wendane-----	---	---	---	---	---	---	-----	---	---	---
James Canyon----	---	---	---	---	---	---	-----	---	---	---
1770: Donna-----	---	---	---	---	---	---	-----	---	---	---
McIvey-----	---	---	---	---	---	---	-----	---	---	---
Heechee-----	---	---	---	---	---	---	-----	---	---	---
1780: Schoer-----	---	---	---	---	---	---	-----	---	---	---
Welch-----	---	---	---	---	---	---	-----	---	---	---
1790: Donna-----	---	---	---	---	---	---	-----	---	---	---
Krenka-----	---	---	---	---	---	---	-----	---	---	---
McIvey-----	---	---	---	---	---	---	-----	---	---	---
1800: Chen-----	---	---	---	---	---	---	-----	---	---	---
Graley-----	---	---	---	---	---	---	-----	---	---	---
Rock Outcrop----	---	---	---	---	---	---	-----	---	---	---
1810: Sumine-----	---	---	---	---	---	---	-----	---	---	---
Tusel-----	---	---	---	---	---	---	-----	---	---	---
Hapgood-----	---	---	---	---	---	---	-----	---	---	---
1820: Hussa-----	---	---	---	---	---	---	-----	---	---	---
Halleck-----	---	---	---	---	---	---	-----	---	---	---
Walsum-----	---	---	---	---	---	---	-----	---	---	---
1831: Enko-----	---	---	---	---	---	---	-----	---	---	---
Kelk-----	---	---	---	---	---	---	-----	---	---	---
Enko-----	---	---	---	---	---	---	-----	---	---	---
1840: Amene-----	---	---	---	---	---	---	-----	---	---	---
Belsac-----	---	---	---	---	---	---	-----	---	---	---
Chen-----	---	---	---	---	---	---	-----	---	---	---
1850: Bullump-----	---	---	---	---	---	---	-----	---	---	---

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordi- nation symbol	Management concerns					Potential productivity			Suggested trees to plant
		Erosion hazard	Equip- ment limita- tion	Seedling mortal- ity	Wind- throw hazard	Plant competi- tion	Common trees	Site index	Volume of wood fiber m3/ha	
Cleavage-----	---	---	---	---	---	---	-----	---	---	---
Rock Outcrop----	---	---	---	---	---	---	-----	---	---	---
1861: Equis-----	---	---	---	---	---	---	-----	---	---	---
Devilsgait-----	---	---	---	---	---	---	-----	---	---	---
1862: Equis-----	---	---	---	---	---	---	-----	---	---	---
Equis-----	---	---	---	---	---	---	-----	---	---	---
Kolda-----	---	---	---	---	---	---	-----	---	---	---
1870: Denied Access----	---	---	---	---	---	---	-----	---	---	---
1880: Water-----	---	---	---	---	---	---	-----	---	---	---

TABLE 8.--BUILDING SITE DEVELOPMENT

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
0053: Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan small stones droughty
Urmafot-----	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope small stones
0062: Amtoft-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Rock Outcrop---	---	---	---	---	---	---
Amtoft-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0066: Zimbob-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Zimbob-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0067: Tecomar-----	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: slope small stones droughty
Tecomar-----	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: slope small stones droughty
Pookaloo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0069: Zimbob-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Hyzen-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope small stones
Rock Outcrop---	---	---	---	---	---	---

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
0070: Stewval-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Eastwell-----	Severe: cemented pan slope	Severe: slope	Severe: cemented pan slope	Severe: slope	Severe: slope	Severe: cemented pan slope
0071: Stowval-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Wesfil-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Rock Outcrop----	---	---	---	---	---	---
0080: Stewval-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0092: Wesfil-----	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: small stones depth to rock
Wintermute-----	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones slope	Moderate: large stones	Moderate: large stones small stones droughty
Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
0098: Wesfil-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Tarnach-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Wesfil-----	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: small stones depth to rock
0099: Wesfil-----	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: small stones depth to rock
Armespan-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Severe: small stones
Heist-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
0100: Benin-----	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Severe: excess salt
Mazuma-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Slight
0101: Toano-----	Slight	Slight	Slight	Slight	Slight	Slight
Linoyer-----	Slight	Slight	Slight	Slight	Slight	Slight
0103: Benin-----	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Severe: excess salt
Playas-----	Severe: ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: excess salt ponding droughty
0111: Gravier-----	Slight	Slight	Slight	Moderate: slope	Slight	Severe: small stones droughty
Armespan-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Severe: small stones
113: Gravier-----	Moderate: slope cutbanks cave	Moderate: slope	Moderate: slope	Moderate: slope	Moderate: slope	Severe: small stones droughty
Gravier-----	Moderate: slope cutbanks cave	Moderate: slope	Moderate: slope	Moderate: slope	Moderate: slope	Severe: small stones droughty
Jericho-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan small stones droughty
0116: Gravier-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: droughty
Izamatc-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: droughty
Loray-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: droughty
0118: Gravier-----	Slight	Slight	Slight	Slight	Slight	Severe: small stones droughty
Automal-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: small stones droughty
Zerk-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Moderate: small stones droughty

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
0119: Wintermute-----	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones slope	Moderate: large stones	Moderate: large stones small stones droughty
Linoyer-----	Slight	Slight	Slight	Moderate: slope	Slight	Slight
0120: Izamatch-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: small stones droughty
Armespan-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Severe: small stones
Cliffdown-----	Slight	Slight	Slight	Slight	Slight	Severe: small stones droughty
0122: Gravier-----	Slight	Slight	Slight	Moderate: slope	Slight	Severe: droughty
Izamatch-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: small stones droughty
0130: Tooole-----	Slight	Slight	Slight	Slight	Slight	Slight
Benin-----	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Severe: excess salt
0140: Gollaher-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones droughty
Belsac-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones
0151: Hopeka-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones droughty
Amena-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Rock Outcrop----	---	---	---	---	---	---
0154: Hopeka-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones droughty

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Tecomar-----	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones small stones droughty
0160: Saltair-----	Severe: wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: frost action low strength wetness	Severe: excess salt wetness
Kawich-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Moderate: excess salt slope droughty
0161: Saltair-----	Severe: wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: frost action low strength wetness	Severe: excess salt wetness
Playas-----	Severe: ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: excess salt ponding droughty
0171: Loray-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: droughty
Gravier-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: small stones droughty
Toano-----	Slight	Slight	Slight	Slight	Slight	Slight
0173: Cliffdown-----	Slight	Slight	Slight	Slight	Slight	Severe: small stones droughty
Armespan-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Severe: small stones
Izamatch-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: small stones droughty
0174: Wintermute-----	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones	Moderate: large stones	Moderate: large stones small stones droughty
Linoyer-----	Slight	Slight	Slight	Slight	Slight	Slight
Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
0175: Loray-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: droughty

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Wintermute-----	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones	Moderate: large stones	Moderate: large stones small stones droughty
0176: Loray-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: droughty
Zerk-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Moderate: small stones droughty
Zerk-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Moderate: small stones droughty
0181: Peeko-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Dewar-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Peeko-----	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope
0182: Peeko-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan
Peeko-----	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope
Gance-----	Moderate: large stones	Moderate: large stones	Moderate: large stones	Moderate: large stones slope	Moderate: large stones	Severe: small stones droughty
0183: Peeko-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan
Enko-----	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: slope
Izar-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0185: Peeko-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan
Peeko-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan
Chiara-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
0186: Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Pharo-----	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Hundraw-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope depth to rock
0187: Peeko-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan
Izar-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Izar-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0188: Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan small stones droughty
Automal-----	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Izar-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0192: Hutchley-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Simon-----	Severe: slope	Severe: shrink-swell slope	Severe: shrink-swell slope	Severe: shrink-swell slope	Severe: shrink-swell slope	Severe: slope
0201: Tecomar-----	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones small stones droughty
Hopeka-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones droughty
Rock Outcrop---	---	---	---	---	---	---

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
0203: Tecomar-----	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: slope small stones droughty
Pockaloo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Pharo-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: slope small stones droughty
0210: Mazuma-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Slight
Hardhat-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Slight
Loray-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Severe: droughty
0211: Valmy-----	Slight	Slight	Slight	Slight	Slight	Moderate: excess salt
Enko-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
0230: Zafod-----	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones droughty
Pyrat-----	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones
Palinor-----	Severe: cemented pan slope cutbanks cave	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: slope small stones droughty
0231: Dacker-----	Severe: cemented pan	Moderate: cemented pan shrink-swell	Severe: cemented pan	Moderate: cemented pan shrink-swell	Severe: low strength	Moderate: cemented pan
Nevador-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: slope
Kelk-----	Slight	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: frost action low strength shrink-swell	Slight
0240: Hundraw-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope depth to rock

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Cobre-----	Moderate: slope depth to rock	Moderate: slope	Moderate: slope depth to rock	Severe: slope	Moderate: frost action slope	Moderate: slope depth to rock
0241: Hundraw-----	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action slope depth to rock	Severe: depth to rock
Peeko-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan
Kzin-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope small stones depth to rock
0242: Cobre-----	Moderate: slope depth to rock	Moderate: slope	Moderate: slope depth to rock	Severe: slope	Moderate: frost action slope	Moderate: slope depth to rock
Hundraw-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope depth to rock
Chiara-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
0244: Hundraw-----	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action slope depth to rock	Severe: depth to rock
Shabliss-----	Severe: cemented pan cutbanks cave	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: frost action cemented pan	Severe: cemented pan
Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
0250: Tzar-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Holborn-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope depth to rock
Kzin-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope small stones depth to rock
0251: Tzar-----	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: small stones depth to rock

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan small stones droughty
Shabliss-----	Severe: cemented pan cutbanks cave	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: frost action cemented pan	Severe: cemented pan
0252: Izar-----	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: small stones depth to rock
Hundraw-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope depth to rock
Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
0260: Dewar-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Chiara-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Hunnton-----	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Moderate: cemented pan
0270: Chiara-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Kelk-----	Slight	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell slope	Moderate: frost action low strength shrink-swell	Slight
Kelk-----	Slight	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding low strength shrink-swell	Slight
0273: Chiara-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Dewar-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Enko-----	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Slight
0276: Chiara-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Peeko-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Urmafot-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
0279: Chiara-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Parisa-----	Severe: cemented pan	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: frost action cemented pan	Severe: droughty
Enko-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
0280: Oupico-----	Severe: cemented pan	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan	Moderate: frost action cemented pan	Moderate: cemented pan
Enko-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Slight
0282: Shabliss-----	Severe: cemented pan cutbanks cave	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: frost action cemented pan	Severe: cemented pan
Pyrat-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: small stones droughty
Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
0310: Sonoma-----	Severe: wetness	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: flooding frost action low strength	Severe: flooding
Devilsgait-----	Severe: wetness cutbanks cave	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding low strength wetness	Severe: flooding wetness
Sonoma-----	Moderate: flooding wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding frost action low strength	Moderate: flooding
0311: Sonoma-----	Slight	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Severe: frost action low strength	Slight
Kelk-----	Slight	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding low strength shrink-swell	Slight
0330: Kzin-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope small stones depth to rock
Holborn-----	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action slope depth to rock	Severe: depth to rock

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Kzin-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope small stones depth to rock
0331: Kzin-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope small stones depth to rock
Cobre-----	Moderate: slope depth to rock	Moderate: slope	Moderate: slope depth to rock	Severe: slope	Moderate: frost action slope	Moderate: slope depth to rock
Jackpot-----	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action slope depth to rock	Severe: depth to rock
0333: Kzin-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope small stones depth to rock
Holborn-----	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action slope depth to rock	Severe: depth to rock
Onkeyo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones droughty
0340: Shuttle-----	Moderate: cemented pan	Slight	Moderate: cemented pan	Moderate: slope	Slight	Slight
Hardhat-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Slight
Shuttle-----	Slight	Slight	Slight	Moderate: slope	Slight	Slight
0350: Jericho-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Jericho-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
0351: Shabliss-----	Severe: cemented pan cutbanks cave	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: frost action cemented pan	Severe: cemented pan
Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
Eastwell-----	Severe: cemented pan	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: cemented pan	Severe: cemented pan

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
0355: Shabliss-----	Severe: cemented pan cutbanks cave	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: frost action cemented pan	Severe: cemented pan
Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
0370: Toano-----	Slight	Slight	Slight	Slight	Slight	Slight
Tulase-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
0371: Linoyer-----	Slight	Slight	Slight	Slight	Slight	Slight
Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
0373: Timpie-----	Slight	Slight	Slight	Slight	Severe: frost action	Moderate: droughty
Piltown-----	Slight	Slight	Slight	Moderate: slope	Slight	Slight
Linoyer-----	Slight	Slight	Slight	Slight	Slight	Slight
0374: Heist-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
Okan-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: droughty
Zerk-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Moderate: small stones droughty
0375: Toano-----	Slight	Slight	Slight	Slight	Slight	Slight
Heist-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
0380: Cobre-----	Moderate: slope depth to rock	Moderate: slope	Moderate: slope depth to rock	Severe: slope	Moderate: frost action slope	Moderate: slope depth to rock
Izar-----	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: small stones depth to rock
Jackpot-----	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action slope depth to rock	Severe: depth to rock

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
0381: Cobre-----	Moderate: slope depth to rock	Moderate: slope	Moderate: slope depth to rock	Severe: slope	Moderate: frost action slope	Moderate: slope depth to rock
Hundraw-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope depth to rock
Jackpot-----	Severe: depth to rock	Moderate: depth to rock	Severe: depth to rock	Moderate: depth to rock	Moderate: frost action depth to rock	Severe: depth to rock
0382: Cobre-----	Moderate: slope depth to rock	Moderate: slope	Moderate: slope depth to rock	Severe: slope	Moderate: frost action slope	Moderate: slope depth to rock
Enko-----	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Slight
0390: Hardol-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones droughty
Muiral-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope
Rubble Land----	Severe: large stones slope	Severe: large stones slope	Severe: large stones slope	Severe: large stones slope	Severe: large stones slope	Severe: large stones small stones droughty
0392: Hardol-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones droughty
Muiral-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope
Onkeyo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones droughty
0400: Cleavage-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Cleavage-----	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: small stones depth to rock
Sumine-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope small stones

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
410: Jericho-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan small stones droughty
411: Jericho-----	Severe: cemented pan slope cutbanks cave	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: slope small stones droughty
Armespan-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Severe: small stones
0420: Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan small stones droughty
Palinor-----	Severe: cemented pan slope cutbanks cave	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: slope small stones droughty
0421: Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan small stones droughty
Automal-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: small stones droughty
0422: Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan small stones droughty
Zimbob-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
0424: Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan small stones droughty
Hundraw-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope depth to rock
Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
0426: Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan small stones droughty
Automal-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: small stones droughty
Wintermute-----	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones slope	Moderate: large stones	Moderate: large stones small stones droughty
0429: Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan small stones droughty
Automal-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: slope small stones droughty
Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan small stones droughty
0430: Graley-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope depth to rock
Pioche-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Cropper-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope small stones
0431: Graley-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
Chen-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
McIvey-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: large stones slope small stones
0440: Lomoline-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Bijorja-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Lomaine-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0460: Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
Automal-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: slope small stones droughty
Hundraw-----	Severe: depth to rock	Moderate: depth to rock	Severe: depth to rock	Moderate: slope depth to rock	Moderate: frost action depth to rock	Severe: depth to rock
0470: Rozara-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Cucamungo-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope small stones depth to rock
Rock Outcrop----	---	---	---	---	---	---
0471: Cucamungo-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope small stones depth to rock
Hendap-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones droughty
Rock Outcrop----	---	---	---	---	---	---
0480: Shabliss-----	Severe: cemented pan cutbanks cave	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: frost action cemented pan	Severe: cemented pan
Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan small stones droughty
0485: Shabliss-----	Severe: cemented pan cutbanks cave	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: frost action cemented pan	Severe: cemented pan
Parisa-----	Severe: cemented pan	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: frost action cemented pan	Severe: droughty

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Hunnton-----	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Moderate: cemented pan
0490: Wintermute-----	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones	Moderate: large stones	Moderate: large stones small stones droughty
Automal-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: small stones droughty
0492: Wintermute-----	Severe: cutbanks cave	Moderate: large stones slope	Moderate: large stones slope	Severe: slope	Moderate: large stones slope	Moderate: large stones small stones droughty
Peeko-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Hundraw-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope depth to rock
0494: Wintermute-----	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones	Moderate: large stones	Moderate: large stones small stones droughty
Pyrat-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: small stones droughty
Automal-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Severe: droughty
0496: Sodhouse-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Sodhouse-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Linoyer-----	Slight	Slight	Slight	Slight	Slight	Moderate: small stones
0497: Sodhouse-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Sodhouse-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan
0501: Pharo-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: slope small stones droughty

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Izar-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
0503: Automal-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: small stones droughty
Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
Wintermute-----	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones slope	Moderate: large stones	Moderate: large stones small stones droughty
0504: Automal-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: small stones droughty
Wintermute-----	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones slope	Moderate: large stones	Moderate: large stones small stones droughty
0510: Adobe-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Hardzem-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Haunchee-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0511: Adobe-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Wardbay-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones droughty
Hardol-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones droughty
0512: Adobe-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Cavehill-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope small stones
Wardbay-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones droughty
0520: Haunchee-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Muiral-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope
Wardbay-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones droughty
0530: Wardbay-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones droughty
Adobe-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Haunchee-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0532: Onkeyo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones droughty
Pockaloo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Tecomar-----	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: slope small stones droughty
0540: Kunzler-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
Sycomat-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Moderate: droughty
0541: Kunzler-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Sheffit-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Moderate: excess salt
0550: Urmafot-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan
Bobs-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan
Urmafot-----	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope
0551: Urmafot-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan
Bobs-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan
552: Urmafot-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan small stones
Pharo-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: small stones droughty
0554: Urmafot-----	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope small stones
Tecomar-----	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: slope small stones droughty
Urmafot-----	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: slope small stones droughty
0561: Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan small stones droughty
Urmafot-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan small stones
Palinor-----	Severe: cemented pan slope cutbanks cave	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: slope small stones droughty

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
0562: Bobs-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan small stones
0563: Bobs-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan
Pyrat-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Severe: small stones
0575: Pookaloo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Cavehill-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope small stones
Rock Outcrop---	---	---	---	---	---	---
0576: Pookaloo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Tecomar-----	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: slope small stones droughty
Onkeyo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones droughty
0582: Sheffit-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Slight
Sheffit-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Moderate: excess salt
Katelana-----	Slight	Moderate: shrink-swell	Severe: shrink-swell	Moderate: shrink-swell	Moderate: frost action low strength shrink-swell	Moderate: excess salt
0590: Upatad-----	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: slope small stones depth to rock
Segura-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope depth to rock

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
0600: Onkeyo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones droughty
Amene-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Pookaloo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0610: Wintermute-----	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones slope	Moderate: large stones	Moderate: large stones small stones droughty
Eastwell-----	Severe: cemented pan	Moderate: cemented pan slope	Severe: cemented pan	Severe: slope	Moderate: cemented pan slope	Severe: cemented pan
0614: Wintermute-----	Severe: cutbanks cave	Moderate: large stones slope	Moderate: large stones slope	Severe: slope	Moderate: large stones slope	Moderate: large stones small stones droughty
Eastwell-----	Severe: cemented pan	Moderate: cemented pan slope	Severe: cemented pan	Severe: slope	Moderate: cemented pan slope	Severe: cemented pan
Zerk-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Moderate: small stones droughty
0617: Wintermute-----	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones slope	Moderate: large stones	Moderate: large stones small stones droughty
Zerk-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Moderate: small stones droughty
Loray-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Moderate: small stones droughty
0620: Atlow-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Atlow-----	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: small stones depth to rock
0631: Eastwell-----	Severe: cemented pan	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: cemented pan	Severe: cemented pan

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Wintermute-----	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones slope	Moderate: large stones	Moderate: large stones small stones droughty
Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
0632: Eastwell-----	Severe: cemented pan	Moderate: cemented pan slope	Severe: cemented pan	Severe: slope	Moderate: cemented pan slope	Severe: cemented pan
Zafod-----	Severe: cutbanks cave	Moderate: large stones slope	Moderate: cemented pan large stones slope	Severe: slope	Moderate: frost action large stones slope	Severe: droughty
0634: Eastwell-----	Severe: cemented pan	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: cemented pan	Severe: cemented pan
Shabliss-----	Severe: cemented pan cutbanks cave	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: frost action cemented pan	Severe: cemented pan
Izar-----	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: small stones depth to rock
0636: Eastwell-----	Severe: cemented pan	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: cemented pan	Severe: cemented pan small stones
Hundraw-----	Severe: depth to rock	Moderate: slope depth to rock	Severe: depth to rock	Severe: slope	Moderate: frost action slope depth to rock	Severe: depth to rock
Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
0650: Mizpah-----	Moderate: too clayey depth to rock	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Moderate: depth to rock
Zerk-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Moderate: small stones droughty
Wintermute-----	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones	Moderate: large stones	Moderate: large stones small stones droughty
0671: Idway-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: droughty
Mysol-----	Severe: cutbanks cave	Moderate: shrink-swell	Slight	Moderate: shrink-swell	Severe: low strength	Slight

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
0672: Idway-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: droughty
James Canyon----	Moderate: wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: frost action	Slight
0680: Simon-----	Severe: slope	Severe: shrink-swell slope	Severe: shrink-swell slope	Severe: shrink-swell slope	Severe: shrink-swell slope	Severe: slope
Graley-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
Chen-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0691: Tarnach-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Tarnach-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Wesfil-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0692: Tarnach-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Upata-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Wesfil-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0700: Shabliss-----	Severe: cemented pan cutbanks cave	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: frost action cemented pan	Severe: cemented pan
Tulase-----	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Slight
Linoyer-----	Slight	Slight	Slight	Moderate: slope	Slight	Slight
0720: Mysol-----	Severe: cutbanks cave	Moderate: shrink-swell	Slight	Moderate: shrink-swell	Severe: low strength	Slight

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Mysol-----	Severe: cutbanks cave	Moderate: shrink-swell	Slight	Moderate: shrink-swell	Severe: low strength	Slight
0730: Idway-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: droughty
Kawich-----	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Mysol-----	Severe: cutbanks cave	Moderate: shrink-swell	Slight	Moderate: shrink-swell	Severe: low strength	Slight
0733: Idway-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: droughty
Idway-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: droughty
Mysol-----	Severe: cutbanks cave	Moderate: shrink-swell	Slight	Moderate: shrink-swell	Severe: low strength	Slight
0740: Upatad-----	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope small stones
Pioche-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope depth to rock
Tarnach-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0760: Playas-----	Severe: ponding	Severe: flooding shrink-swell ponding	Severe: flooding shrink-swell ponding	Severe: flooding shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: excess salt ponding droughty
0761: Umberland-----	Severe: ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: excess sodium excess salt ponding
Umberland-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: frost action low strength shrink-swell	Severe: excess sodium excess salt too clayey
0762: Umberland-----	Severe: ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: excess sodium excess salt ponding
Playas-----	Severe: ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: excess salt ponding droughty

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
0763: Equis-----	Moderate: too clayey wetness	Severe: flooding shrink-swell	Severe: flooding shrink-swell	Severe: flooding shrink-swell	Severe: low strength shrink-swell	Severe: excess sodium excess salt too clayey
Umberland-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: frost action low strength shrink-swell	Severe: excess sodium excess salt too clayey
Duffer-----	Severe: wetness	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: flooding frost action low strength	Severe: excess salt
0764: Umberland-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: frost action low strength shrink-swell	Severe: excess sodium excess salt
Rubylake-----	Severe: wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: frost action	Moderate: excess salt wetness
Orupa-----	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Slight
0765: Umberland-----	Severe: ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: excess sodium excess salt ponding
Umberland-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: frost action low strength shrink-swell	Severe: excess sodium excess salt too clayey
Wendane-----	Moderate: wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: frost action	Severe: excess sodium excess salt
0767: Umberland-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: frost action low strength shrink-swell	Severe: excess sodium excess salt too clayey
Umberland-----	Severe: ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: excess sodium excess salt ponding
Orupa-----	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Severe: too clayey
0781: Mysol-----	Severe: cutbanks cave	Moderate: shrink-swell	Slight	Moderate: shrink-swell	Severe: low strength	Slight
Benin-----	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Severe: excess salt

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Wendane-----	Moderate: wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: frost action	Severe: excess sodium excess salt
0800: Mazuma-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Slight
Toano-----	Slight	Slight	Slight	Slight	Slight	Slight
0801: Mazuma-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Slight
Zerk-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Moderate: small stones droughty
Okan-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: droughty
0804: Mazuma-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Slight
Kawich-----	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Playas-----	Severe: ponding	Severe: flooding shrink-swell ponding	Severe: flooding shrink-swell ponding	Severe: flooding shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: excess salt ponding droughty
0807: Mazuma-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Slight
Kunzler-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
Zerk-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Moderate: small stones droughty
0823: Kunzler-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
Pyrat-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: small stones droughty
Blimo-----	Slight	Slight	Slight	Slight	Moderate: frost action	Moderate: small stones droughty
0824: Kunzler-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
Katelana-----	Slight	Moderate: shrink-swell	Severe: shrink-swell	Moderate: shrink-swell	Moderate: frost action low strength shrink-swell	Moderate: excess salt

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
0827: Kunzler-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
James Canyon----	Moderate: wetness	Moderate: shrink-swell flooding	Moderate: shrink-swell wetness flooding	Moderate: shrink-swell flooding	Severe: flooding frost action	Moderate: flooding wetness
James Canyon----	Moderate: wetness	Moderate: shrink-swell flooding	Moderate: shrink-swell wetness flooding	Moderate: shrink-swell flooding	Severe: flooding frost action	Moderate: flooding wetness
0828: Kunzler-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
Pyrat-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: small stones droughty
Wendane-----	Moderate: wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: frost action	Severe: excess sodium excess salt
0830: Pharo-----	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Kzin-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope small stones depth to rock
Pharo-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: slope small stones droughty
0842: Katelana-----	Slight	Moderate: shrink-swell	Severe: shrink-swell	Moderate: shrink-swell	Moderate: frost action low strength shrink-swell	Moderate: excess salt
Timpie-----	Slight	Slight	Slight	Slight	Severe: frost action	Moderate: droughty
0843: Katelana-----	Slight	Moderate: shrink-swell	Severe: shrink-swell	Moderate: shrink-swell	Moderate: frost action low strength shrink-swell	Moderate: excess salt
Kawich-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Moderate: excess salt droughty
0845: Katelana-----	Slight	Moderate: shrink-swell	Severe: shrink-swell	Moderate: shrink-swell	Moderate: frost action low strength shrink-swell	Moderate: excess salt
Ragtown-----	Moderate: too clayey	Moderate: shrink-swell	Severe: shrink-swell	Moderate: shrink-swell	Severe: low strength	Moderate: excess salt
Timpie-----	Slight	Slight	Slight	Slight	Severe: frost action	Moderate: droughty

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
0847: Mazuma-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Slight
Blimo-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: droughty
Wintermute-----	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones	Moderate: large stones	Moderate: large stones small stones droughty
0850: Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan small stones droughty
Wintermute-----	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones slope	Moderate: large stones	Moderate: large stones small stones droughty
Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
0851: Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan small stones droughty
Zimbob-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Tecomar-----	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: slope small stones droughty
0852: Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan small stones droughty
Pyrat-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: small stones droughty
Shabliss-----	Severe: cemented pan cutbanks cave	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: frost action cemented pan	Severe: cemented pan
0854: Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan small stones droughty
Automal-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: slope small stones droughty

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Shabliss-----	Severe: cemented pan cutbanks cave	Moderate: cemented pan slope	Severe: cemented pan	Severe: slope	Moderate: frost action cemented pan slope	Severe: cemented pan
0856: Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan
Parisa-----	Severe: cemented pan	Moderate: cemented pan slope	Severe: cemented pan	Severe: slope	Moderate: frost action cemented pan slope	Severe: droughty
0857: Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan small stones droughty
Shabliss-----	Severe: cemented pan cutbanks cave	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: frost action cemented pan	Severe: cemented pan
Linoyer-----	Slight	Slight	Slight	Slight	Slight	Slight
0858: Palinor-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan small stones droughty
Automal-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: small stones droughty
Linoyer-----	Slight	Slight	Slight	Slight	Slight	Slight
0870: Theriot-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Zimbob-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0880: Duffer-----	Moderate: wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: frost action low strength	Severe: excess salt
Duffer-----	Severe: wetness	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: flooding frost action low strength	Severe: excess salt
Kolda-----	Severe: wetness	Severe: shrink-swell wetness	Severe: shrink-swell wetness	Severe: shrink-swell wetness	Severe: low strength shrink-swell wetness	Severe: wetness

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
0881: Duffer-----	Moderate: wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: frost action low strength	Severe: excess salt
Kunzler-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
0882: Duffer-----	Severe: wetness	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: flooding frost action low strength	Severe: excess salt
Kolda-----	Severe: wetness	Severe: shrink-swell wetness	Severe: shrink-swell wetness	Severe: shrink-swell wetness	Severe: low strength shrink-swell wetness	Severe: wetness
0894: Zerk-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Moderate: small stones droughty
Threesee-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: small stones
Mazuma-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Slight
0900: Zerk-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Moderate: small stones droughty
Automal-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: small stones droughty
Lincyer-----	Slight	Slight	Slight	Slight	Slight	Slight
0910: Ragtown-----	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Slight
Ragtown-----	Moderate: too clayey	Moderate: shrink-swell	Severe: shrink-swell	Moderate: shrink-swell	Severe: low strength	Moderate: excess salt
0912: Katelana-----	Slight	Moderate: shrink-swell	Severe: shrink-swell	Moderate: shrink-swell	Moderate: frost action low strength shrink-swell	Moderate: excess salt
Katelana-----	Slight	Moderate: shrink-swell	Severe: shrink-swell	Moderate: shrink-swell	Moderate: frost action low strength shrink-swell	Moderate: excess salt
0914: Katelana-----	Slight	Moderate: shrink-swell	Severe: shrink-swell	Moderate: shrink-swell	Moderate: frost action low strength shrink-swell	Moderate: excess salt

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Benin-----	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Severe: excess salt
Sheffit-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Moderate: excess salt
0917: Katelana-----	Slight	Moderate: shrink-swell	Severe: shrink-swell	Moderate: shrink-swell	Moderate: frost action low strength shrink-swell	Moderate: excess salt
Sheffit-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Moderate: excess salt
Ragtown-----	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Slight
0918: Katelana-----	Slight	Moderate: shrink-swell	Severe: shrink-swell	Moderate: shrink-swell	Moderate: frost action low strength shrink-swell	Moderate: excess salt
Zorravista-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Moderate: droughty
Playas-----	Severe: ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: excess salt ponding droughty
0930: Okan-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: droughty
Toano-----	Slight	Slight	Slight	Slight	Slight	Slight
Loray-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: droughty
0932: Okan-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: droughty
Pyrat-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: small stones droughty
0941: Sheffit-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Moderate: excess salt
Sheffit-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Slight
Zorravista-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Moderate: droughty

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
0943: Sheffit-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Moderate: excess salt
Umberland-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: frost action low strength shrink-swell	Severe: excess sodium excess salt too clayey
0960: Gravier-----	Slight	Slight	Slight	Moderate: slope	Slight	Severe: small stones droughty
Zerk-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Moderate: small stones droughty
0961: Gravier-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: droughty
Piltown-----	Slight	Slight	Slight	Moderate: slope	Slight	Slight
Zerk-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Moderate: small stones droughty
0972: Zimboh-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Zimboh-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Pookaloo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0974: Zimboh-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Tecomar-----	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: slope small stones droughty
Pookaloo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0975: Zimboh-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Tecomar-----	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: slope small stones droughty
Tecomar-----	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: slope small stones droughty
0980: Onkeyo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones droughty
Pookaloo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Zimbob-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0990: Hyzen-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope small stones
Zimbob-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
0991: Hyzen-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope small stones
Cavehill-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope small stones
Tecomar-----	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: slope small stones droughty
1000: Pyrat-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: small stones droughty
Zerk-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Moderate: small stones droughty
1001: Pyrat-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: small stones droughty

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
Eastwell-----	Severe: cemented pan	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: cemented pan	Severe: cemented pan
1002: Threese-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: small stones
Kunzler-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
Threese-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: small stones
1003: Pyrat-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: slope small stones droughty
Hundraw-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope depth to rock
Tulase-----	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Slight
1004: Pyrat-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: small stones droughty
Parisa-----	Severe: cemented pan	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: frost action cemented pan	Severe: droughty
Tulase-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
1005: Pyrat-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: small stones droughty
Zerk-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Moderate: small stones droughty
Parisa-----	Severe: cemented pan	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: frost action cemented pan	Severe: droughty
1006: Pyrat-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: small stones droughty
Blimo-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: droughty

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1007: Pyrat-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: slope small stones droughty
Parisa-----	Severe: cemented pan	Moderate: cemented pan slope	Severe: cemented pan	Severe: slope	Moderate: frost action cemented pan slope	Severe: droughty
Automal-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: slope small stones droughty
1009: Pyrat-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: small stones droughty
Tulase-----	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Slight
Wintermute-----	Severe: cutbanks cave	Moderate: large stones	Moderate: large stones	Moderate: large stones slope	Moderate: large stones	Moderate: large stones small stones droughty
1020: Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
Eastwell-----	Severe: cemented pan	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: cemented pan	Severe: cemented pan
Blimo-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: droughty
1023: Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
Katelana-----	Slight	Moderate: shrink-swell	Severe: shrink-swell	Moderate: shrink-swell	Moderate: frost action low strength shrink-swell	Moderate: excess salt
1030: Segura-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
Bullump-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones
Hutchley-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1040: Segura-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope depth to rock
Pioche-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Chen-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
1061: Pioche-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Cucamungo-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope small stones depth to rock
Rock Outcrop----	---	---	---	---	---	---
1070: Zafod-----	Severe: cutbanks cave	Moderate: large stones slope	Moderate: cemented pan large stones slope	Severe: slope	Moderate: frost action large stones slope	Severe: droughty
Automal-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Severe: droughty
Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
1080: Cotant-----	Severe: depth to rock	Severe: shrink-swell	Severe: shrink-swell depth to rock	Severe: shrink-swell slope	Severe: low strength shrink-swell	Severe: depth to rock
Segura-----	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: large stones depth to rock
1111: Parisa-----	Severe: cemented pan	Moderate: cemented pan	Severe: cemented pan	Moderate: cemented pan slope	Moderate: frost action cemented pan	Severe: droughty
1120: Okan-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: droughty
Automal-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: slope small stones droughty

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1150: Adobe-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Wardbay-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones droughty
Haunchee-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope small stones
1161: Pharo-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: slope small stones droughty
Bobs-----	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan
Pookaloo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
1171: Pyrat-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: small stones droughty
Automal-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: small stones droughty
Gravier-----	Slight	Slight	Slight	Moderate: slope	Slight	Severe: small stones droughty
1172: Pyrat-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Severe: small stones
Automal-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Severe: small stones droughty
Automal-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: small stones droughty
1173: Pyrat-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: small stones droughty
Automal-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: small stones droughty

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1174: Pyrat-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: small stones droughty
Tosser-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: small stones droughty
1180: Haunchee-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope small stones
Cavehill-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope
1181: Haunchee-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Halacan-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Wardbay-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones droughty
1190: Upatad-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Atlow-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Upatad-----	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope small stones
1191: Upatad-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Pioche-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Rock Outcrop----	---	---	---	---	---	---

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1200: Hardol-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones droughty
Hardzem-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Rock Outcrop----	---	---	---	---	---	---
1201: Hardol-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones droughty
Rock Outcrop----	---	---	---	---	---	---
Wardbay-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones droughty
1210: Blimo-----	Slight	Slight	Slight	Slight	Moderate: frost action	Moderate: small stones droughty
Kunzler-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
Linoyer-----	Slight	Slight	Slight	Slight	Slight	Slight
1213: Blimo-----	Slight	Slight	Slight	Slight	Moderate: frost action	Moderate: droughty
Threesee-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Moderate: small stones droughty
1215: Blimo-----	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: droughty
Zorravista-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Moderate: slope droughty
1216: Blimo-----	Slight	Slight	Slight	Slight	Moderate: frost action	Moderate: droughty
Idway-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: droughty
Mazuma-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Slight
1220: Onkeyo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones droughty

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Adobe-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Pookaloo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
1230: Hardzem-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones
Haunchee-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Wardbay-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones droughty
1240: Benin-----	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Severe: excess salt
Benin-----	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Severe: excess salt
1241: Benin-----	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Severe: excess salt
Playas-----	Severe: ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: excess salt ponding droughty
Benin-----	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Severe: excess salt
1250: Tecomar-----	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: slope small stones droughty
Pookaloo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
1270: Katelana-----	Slight	Moderate: shrink-swell	Severe: shrink-swell	Moderate: shrink-swell	Moderate: frost action low strength shrink-swell	Moderate: excess salt
Sheffit-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Moderate: excess salt

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1271: Uvada-----	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Severe: excess sodium
Ragtown-----	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Slight
1272: Katelana-----	Slight	Moderate: shrink-swell	Severe: shrink-swell	Moderate: shrink-swell	Moderate: frost action low strength shrink-swell	Moderate: excess salt
Kawich-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Moderate: excess salt slope droughty
1280: Sycomat-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Slight
Kunzler-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
1281: Sycomat-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Slight
Mazuma-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Slight
1290: Heist-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
Blimo-----	Slight	Slight	Slight	Slight	Moderate: frost action	Moderate: small stones droughty
1300: Cavehill-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: large stones slope small stones
Haunchee-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Hardzem-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
1360: Toba-----	Severe: wetness cutbanks cave	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: flooding frost action	Severe: flooding
Appian-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: excess sodium
1370: Orupa-----	Moderate: too clayey	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Slight

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Playas-----	Severe: ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: excess salt ponding droughty
Boofuss-----	Severe: ponding	Severe: flooding shrink-swell ponding	Severe: flooding ponding	Severe: flooding shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: excess sodium excess salt ponding
1380: Hulderman-----	Severe: wetness cutbanks cave	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: flooding frost action	Severe: flooding
Toba-----	Severe: wetness cutbanks cave	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: flooding frost action	Severe: flooding
Benin-----	Moderate: too clayey	Severe: flooding shrink-swell	Severe: flooding shrink-swell	Severe: flooding shrink-swell	Severe: low strength shrink-swell	Severe: excess salt
1390: Wendane-----	Moderate: wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: frost action	Severe: excess sodium excess salt
Mysol-----	Severe: cutbanks cave	Moderate: shrink-swell	Slight	Moderate: shrink-swell	Severe: low strength	Slight
Toba-----	Severe: wetness cutbanks cave	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: flooding frost action	Severe: flooding
1410: Threesee-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Moderate: small stones droughty
Tosser-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: small stones droughty
1411: Threesee-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: small stones
Linoyer-----	Slight	Slight	Slight	Slight	Slight	Moderate: small stones
Okan-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Moderate: flooding frost action	Moderate: droughty
1412: Threesee-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: small stones
Idway-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: droughty
1413: Idway-----	Severe: cutbanks cave	Slight	Slight	Slight	Moderate: frost action	Moderate: droughty

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Zorravista-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Moderate: slope droughty
Kunzler-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
1414: Threesee-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: small stones
Shantown-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Moderate: small stones droughty
Kunzler-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
1430: Pookaloo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Tecomar-----	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: slope small stones droughty
Rock Outcrop----	---	---	---	---	---	---
1440: Boofuss-----	Severe: ponding	Severe: flooding shrink-swell ponding	Severe: flooding ponding	Severe: flooding shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: excess sodium excess salt ponding
Boofuss-----	Severe: ponding	Severe: flooding shrink-swell ponding	Severe: flooding ponding	Severe: flooding shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: excess sodium excess salt ponding
Equis-----	Severe: wetness	Severe: flooding shrink-swell wetness	Severe: flooding shrink-swell wetness	Severe: flooding shrink-swell wetness	Severe: low strength shrink-swell	Severe: excess sodium excess salt too clayey
1441: Boofuss-----	Severe: ponding	Severe: flooding shrink-swell ponding	Severe: flooding ponding	Severe: flooding shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: excess sodium excess salt ponding
Wendane-----	Moderate: wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: frost action	Severe: excess sodium excess salt
Umberland-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: frost action low strength shrink-swell	Severe: excess sodium excess salt too clayey
1450: Piltown-----	Slight	Slight	Slight	Moderate: slope	Slight	Slight

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Kawich-----	Severe: cutbanks cave	Moderate: slope	Moderate: slope	Severe: slope	Moderate: slope	Moderate: excess salt slope droughty
1460: Tosser-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: small stones droughty
Threesee-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Moderate: small stones droughty
1471: Timpie-----	Slight	Slight	Slight	Slight	Severe: frost action	Moderate: droughty
Kunzler-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
Threesee-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: small stones
1480: Tulase-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
Linoyer-----	Slight	Slight	Slight	Slight	Slight	Slight
1500: Tocole-----	Slight	Slight	Slight	Slight	Slight	Slight
Loray-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: droughty
1510: Izamatch-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: droughty
Cliffdown-----	Slight	Slight	Slight	Slight	Slight	Severe: small stones droughty
1520: Izamatch-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: droughty
Izamatch-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: droughty
Luning-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: droughty
1521: Izamatch-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: droughty
Izamatch-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: droughty
Theriot-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

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TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1541: Kyler-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Kyler-----	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: small stones depth to rock
Rock Outcrop----	---	---	---	---	---	---
1542: Kyler-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Amtoft-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Jericho-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan small stones droughty
1550: Jericho-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan slope	Severe: cemented pan	Severe: cemented pan small stones droughty
Jericho-----	Severe: cemented pan slope cutbanks cave	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: cemented pan slope	Severe: slope small stones droughty
1560: Toano-----	Slight	Slight	Slight	Slight	Slight	Slight
Timpie-----	Slight	Slight	Slight	Slight	Severe: frost action	Moderate: droughty
1570: Jericho-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan small stones droughty
Xeric Torriorthents--	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope droughty
1580: Armespan-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Severe: small stones
Jericho-----	Severe: cemented pan cutbanks cave	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan	Severe: cemented pan small stones droughty
1581: Armespan-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Severe: small stones

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Kyler-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Heist-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
1582: Armespan-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Severe: small stones
Xeric Torriorthents--	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope droughty
1590: Luning-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: droughty
Luning-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: droughty
Loray-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Moderate: small stones droughty
1591: Luning-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Severe: droughty
Izamatch-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Severe: small stones droughty
Badland-----	Severe: slope	Severe: shrink-swell slope	Severe: shrink-swell slope	Severe: shrink-swell slope	Severe: low strength shrink-swell slope	Severe: excess salt slope
1600: Eaglepass-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones droughty
Amtoft-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
1610: Xeric Torriorthents--	Severe: slope cutbanks cave	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope droughty
Armespan-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Moderate: frost action	Severe: small stones
Badland-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope depth to rock droughty

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1620: Kolda-----	Severe: ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: ponding
Duffer-----	Severe: wetness	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: flooding frost action	Severe: excess salt
Sonoma-----	Severe: wetness	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: flooding frost action low strength	Severe: flooding
1621: Kolda-----	Severe: ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: ponding
Rubylake-----	Severe: wetness	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: frost action	Severe: excess salt
Kolda-----	Severe: ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: ponding
1622: Kolda-----	Severe: ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: ponding
1623: Kolda-----	Severe: ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: ponding
Water-----	---	---	---	---	---	---
1630: Pookaloo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Cavehill-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope small stones
Rock Outcrop----	---	---	---	---	---	---
1631: Pookaloo-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Tecomar-----	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: large stones slope depth to rock	Severe: slope small stones droughty

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Wardbay-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones droughty
1640: Jungo-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones
Jungo-----	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Severe: small stones
1650: Shantown-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Moderate: small stones droughty
Zorravista-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Moderate: droughty
1651: Shantown-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Moderate: small stones droughty
Shantown-----	Severe: cutbanks cave	Slight	Slight	Moderate: slope	Slight	Moderate: small stones droughty
1660: Wendane-----	Moderate: flooding wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding frost action	Severe: excess sodium excess salt
Logan-----	Severe: wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding frost action low strength	Moderate: flooding wetness
1670: Wendane-----	Moderate: wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: frost action	Severe: excess sodium excess salt
Logan-----	Severe: wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding frost action low strength	Moderate: flooding wetness
Wendane-----	Moderate: flooding wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding frost action	Severe: excess sodium excess salt
1680: Rubylake-----	Severe: wetness	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: frost action	Severe: excess salt
Kolda-----	Severe: ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: shrink-swell ponding	Severe: low strength shrink-swell ponding	Severe: ponding
Wendane-----	Moderate: wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: frost action	Severe: excess sodium excess salt

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1681: Wendane-----	Moderate: wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: frost action	Severe: excess sodium excess salt
Logan-----	Severe: wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding frost action low strength	Moderate: flooding wetness
Umberland-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: frost action low strength shrink-swell	Severe: excess sodium excess salt
1690: Kranka-----	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: slope
Secrepass-----	Moderate: too clayey	Moderate: shrink-swell	Slight	Moderate: shrink-swell slope	Moderate: frost action shrink-swell	Moderate: small stones droughty
1700: Heechee-----	Moderate: large stones slope	Moderate: large stones slope	Moderate: large stones slope	Severe: slope	Moderate: frost action large stones slope	Moderate: large stones small stones droughty
Rubicity-----	Moderate: slope	Moderate: slope	Moderate: slope	Severe: slope	Moderate: frost action slope	Moderate: slope small stones droughty
Heechee-----	Moderate: large stones slope	Moderate: large stones slope	Moderate: large stones slope	Severe: slope	Moderate: frost action large stones slope	Severe: small stones
1702: Heechee-----	Moderate: large stones	Moderate: large stones	Moderate: large stones	Moderate: large stones slope	Moderate: frost action large stones	Moderate: large stones small stones droughty
McIvey-----	Moderate: large stones too clayey	Moderate: large stones shrink-swell	Moderate: large stones shrink-swell	Moderate: large stones shrink-swell slope	Moderate: frost action low strength shrink-swell	Severe: large stones small stones
Rubicity-----	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Moderate: small stones droughty
1710: James Canyon---	Severe: wetness	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: flooding frost action	Moderate: flooding wetness
Wendane-----	Moderate: wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: frost action	Severe: excess sodium excess salt
1711: James Canyon---	Severe: wetness	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: flooding frost action	Moderate: flooding wetness

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Wendane-----	Moderate: wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: frost action	Severe: excess sodium excess salt
Wendane-----	Moderate: flooding wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding frost action	Severe: excess sodium excess salt
1720: Welch-----	Severe: wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding frost action wetness	Severe: wetness
1721: Welch-----	Severe: wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding frost action wetness	Severe: wetness
Welsum-----	Severe: wetness cutbanks cave	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding frost action wetness	Severe: flooding wetness
1722: Welch-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Severe: frost action	Slight
Slipback-----	Severe: cutbanks cave	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: frost action shrink-swell	Severe: excess sodium
Welch-----	Severe: wetness cutbanks cave	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding frost action	Moderate: flooding wetness
1723: Welch-----	Severe: wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding frost action wetness	Severe: wetness
Welch-----	Moderate: wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: frost action low strength	Slight
1730: McIvey-----	Moderate: large stones slope too clayey	Moderate: large stones shrink-swell slope	Moderate: large stones shrink-swell slope	Severe: slope	Moderate: low strength shrink-swell slope	Severe: large stones small stones
Donna-----	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan shrink-swell	Severe: shrink-swell slope	Severe: low strength shrink-swell	Moderate: cemented pan slope small stones
1731: McIvey-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: large stones slope small stones
Chen-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Donna-----	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan shrink-swell	Severe: shrink-swell slope	Severe: low strength shrink-swell	Moderate: cemented pan slope
1732: McIvey-----	Moderate: large stones too clayey	Moderate: large stones shrink-swell	Moderate: large stones shrink-swell	Moderate: large stones shrink-swell slope	Moderate: frost action large stones shrink-swell	Moderate: large stones small stones droughty
Stampede-----	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Moderate: cemented pan small stones
Heechee-----	Moderate: large stones slope	Moderate: large stones slope	Moderate: large stones slope	Severe: slope	Moderate: frost action large stones slope	Moderate: large stones small stones droughty
1740: Slipback-----	Severe: cutbanks cave	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: frost action shrink-swell	Severe: excess sodium
Welch-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Severe: frost action	Slight
1741: Slipback-----	Severe: cutbanks cave	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: frost action shrink-swell	Severe: excess sodium
Shantown-----	Severe: cutbanks cave	Slight	Slight	Slight	Slight	Moderate: small stones droughty
Toba-----	Severe: wetness cutbanks cave	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: flooding frost action	Severe: flooding
1750: Heechee-----	Moderate: large stones	Moderate: large stones	Moderate: large stones	Moderate: large stones	Moderate: frost action large stones	Moderate: small stones droughty
Welch-----	Severe: wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding frost action wetness	Severe: wetness
Welch-----	Moderate: wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: frost action low strength	Slight
1760: Lykal-----	Severe: wetness	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: frost action	Moderate: wetness
Wendane-----	Moderate: flooding wetness	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding frost action	Severe: excess sodium excess salt
James Canyon----	Severe: wetness	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: flooding frost action	Moderate: flooding wetness

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
1770: Donna-----	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan shrink-swell	Severe: shrink-swell slope	Severe: low strength shrink-swell	Moderate: cemented pan slope small stones
McIvey-----	Moderate: large stones slope too clayey	Moderate: large stones shrink-swell slope	Moderate: large stones shrink-swell slope	Severe: slope	Moderate: low strength shrink-swell slope	Severe: large stones small stones
Heechee-----	Moderate: large stones slope	Moderate: large stones slope	Moderate: large stones slope	Severe: slope	Moderate: frost action large stones slope	Severe: small stones
1780: Schoer-----	Severe: cutbanks cave	Moderate: shrink-swell	Slight	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: droughty
Welch-----	Severe: wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding frost action wetness	Severe: wetness
1790: Donna-----	Severe: cemented pan	Severe: shrink-swell	Severe: cemented pan shrink-swell	Severe: shrink-swell slope	Severe: low strength shrink-swell	Moderate: cemented pan slope small stones
Krenka-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
McIvey-----	Moderate: large stones slope too clayey	Moderate: large stones shrink-swell slope	Moderate: large stones shrink-swell slope	Severe: slope	Moderate: low strength shrink-swell slope	Severe: large stones small stones
1800: Chen-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Graley-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock
Rock Outcrop---	---	---	---	---	---	---
1810: Sumine-----	Severe: slope depth to rock	Severe: slope	Severe: slope depth to rock	Severe: slope	Severe: slope	Severe: slope small stones
Tusal-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope
Hapgood-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones
1820: Hussa-----	Severe: wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding low strength wetness	Severe: flooding wetness

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Halleck-----	Severe: wetness	Severe: flooding	Severe: flooding wetness	Severe: flooding	Severe: flooding frost action low strength	Severe: flooding
Welsum-----	Severe: wetness cutbanks cave	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding frost action wetness	Severe: flooding wetness
1831: Enko-----	Slight	Slight	Slight	Moderate: slope	Moderate: frost action	Slight
Kelk-----	Slight	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: frost action low strength shrink-swell	Slight
Enko-----	Slight	Slight	Slight	Slight	Moderate: frost action	Slight
1840: Amens-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Belsac-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones
Chen-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
1850: Bullump-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope small stones
Cleavage-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope small stones depth to rock
Rock Outcrop----	---	---	---	---	---	---
1861: Equis-----	Severe: wetness	Severe: flooding shrink-swell wetness	Severe: flooding shrink-swell wetness	Severe: flooding shrink-swell wetness	Severe: low strength shrink-swell	Severe: excess sodium excess salt too clayey
Devilsgait-----	Severe: wetness cutbanks cave	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding low strength wetness	Severe: flooding wetness
1862: Equis-----	Severe: wetness	Severe: flooding shrink-swell wetness	Severe: flooding shrink-swell wetness	Severe: flooding shrink-swell wetness	Severe: low strength shrink-swell	Severe: excess sodium excess salt too clayey

TABLE 8.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Equis-----	Severe: wetness	Severe: flooding shrink-swell wetness	Severe: flooding shrink-swell wetness	Severe: flooding shrink-swell wetness	Severe: low strength shrink-swell	Severe: excess sodium excess salt too clayey
Kolda-----	Severe: wetness	Severe: shrink-swell wetness	Severe: shrink-swell wetness	Severe: shrink-swell wetness	Severe: low strength shrink-swell wetness	Severe: wetness
1870: Denied Access---	---	---	---	---	---	---
1880: Water-----	---	---	---	---	---	---

TABLE 9.--CONSTRUCTION MATERIALS

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
0053: Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Urmafot-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim cemented pan small stones
0062: Amtoft-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Rock Outcrop----	---	---	---	---
Amtoft-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0066: Zimbob-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Zimbob-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0067: Tecomar-----	Poor: large stones slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
Tecomar-----	Poor: large stones slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
Pookaloo-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0069: Zimbob-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Hyzen-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Rock Outcrop----	---	---	---	---

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
0070: Stewval-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Eastwell-----	Fair: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
0071: Stewval-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Wesfil-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Rock Outcrop----	---	---	---	---
0080: Stewval-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0092: Wesfil-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
Wintermute-----	Fair: large stones	Probable	Probable	Poor: area reclaim small stones
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
0098: Wesfil-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Tarnach-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Wesfil-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
0099: Wesfil-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
Armespan-----	Good	Probable	Probable	Poor: area reclaim excess salt small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Heist-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: area reclaim small stones
0100: Benin-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
Mazuma-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too sandy
0101: Toano-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: thin layer
Linoyer-----	Good	Improbable: excess fines	Improbable: excess fines	Good
0103: Benin-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
Playas-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey wetness
0111: Gravier-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
Armespan-----	Good	Probable	Probable	Poor: area reclaim excess salt small stones
113: Gravier-----	Good	Probable excess fines	Probable excess fines	Poor: area reclaim small stones
Gravier-----	Good	Probable excess fines	Probable excess fines	Poor: area reclaim small stones
Jericho-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim cemented pan small stones
0116: Gravier-----	Good	Probable	Probable	Poor: area reclaim small stones
Izamatch-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
Loray-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones too sandy

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
0118: Gravier-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
Automal-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
Zerk-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
0119: Wintermute-----	Fair: large stones	Probable	Probable	Poor: area reclaim small stones
Linoyer-----	Good	Improbable: excess fines	Improbable: excess fines	Good
0120: Izamatch-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
Armespan-----	Good	Probable	Probable	Poor: area reclaim excess salt small stones
Cliffdown-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim excess salt small stones
0122: Gravier-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
Izamatch-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
0130: Tooele-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: excess salt small stones
Benin-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
0140: Gollaher-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Belsac-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
0151: Hopeka-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Amene-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Rock Outcrop----	---	---	---	---
0154: Hopeka-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Tecomar-----	Poor: large stones slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
0160: Saltair-----	Poor: low strength wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess salt wetness
Kawich-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: too sandy
0161: Saltair-----	Poor: low strength wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess salt wetness
Playas-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey wetness
0171: Loray-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones too sandy
Gravier-----	Good	Probable	Probable	Poor: area reclaim small stones
Toano-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: thin layer
0173: Cliffdown-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim excess salt small stones
Armespan-----	Good	Probable	Probable	Poor: area reclaim excess salt small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Izamatc-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
0174: Wintermute-----	Fair: large stones	Probable	Probable	Poor: area reclaim small stones
Linoyer-----	Good	Improbable: excess fines	Improbable: excess fines	Good
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
0175: Loray-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones too sandy
Wintermute-----	Fair: large stones	Probable	Probable	Poor: area reclaim small stones
0176: Loray-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones too sandy
Zerk-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
Zerk-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
0181: Peeko-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones
Dewar-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones
Peeko-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan slope small stones
0182: Peeko-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones
Peeko-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan slope small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Gance-----	Fair: large stones	Improbable: small stones	Probable	Poor: area reclaim small stones
0183: Peeko-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones
Enko-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Izar-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0185: Peeko-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones
Chiara-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
0186: Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Pharo-----	Fair: slope	Improbable: small stones	Probable	Poor: area reclaim slope small stones
Hundraw-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0187: Peeko-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones
Izar-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Izar-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0188: Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Automal-----	Poor: slope	Improbable: small stones	Probable	Poor: area reclaim slope small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Izar-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0192: Hutchley-----	Poor: depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
Simon-----	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too clayey
0201: Tecomar-----	Poor: large stones slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
Hopeka-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Rock Outcrop----	---	---	---	---
0203: Tecomar-----	Poor: large stones depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
Peckaloo-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Pharo-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
0210: Mazuma-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too sandy
Hardhat-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too sandy
Loray-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones too sandy
0211: Valmy-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: area reclaim excess salt small stones
Enko-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
0230: Zafod-----	Fair: large stones slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
Pyrat-----	Fair: slope	Probable	Probable	Poor: area reclaim slope small stones
Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
0231: Dacker-----	Poor: cemented pan low strength	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Nevador-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Kelk-----	Fair: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
0240: Hundraw-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Cobre-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Fair: small stones thin layer depth to rock
0241: Hundraw-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
Peeko-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones
Kzin-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0242: Cobre-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Fair: small stones thin layer depth to rock
Hundraw-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Chiara-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
0244: Hundraw-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
Shabliss-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
0250: Izar-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Holborn-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Kzin-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0251: Izar-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Shabliss-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
0252: Izar-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
Hundraw-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
0260: Dewar-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones
Chiara-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Hunnton-----	Poor: cemented pan low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: small stones too clayey
0270: Chiara-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Kelk-----	Fair: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Kelk-----	Fair: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
0273: Chiara-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Dewar-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones
Enko-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
0276: Chiara-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Peeko-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones
Urmafot-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim cemented pan small stones
0279: Chiara-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan
Parisa-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim small stones
Enko-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: excess salt small stones thin layer
0280: Oupico-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Enko-----	Good	Probable	Probable	Fair: area reclaim small stones
0282: Shabliss-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Pyrat-----	Good	Probable	Probable	Poor: area reclaim small stones
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
0310: Sonoma-----	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Fair: too clayey
Devilsgait-----	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: wetness
Sonoma-----	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Fair: excess salt too clayey
0311: Sonoma-----	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Fair: too clayey
Kalk-----	Fair: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
0330: Kzin-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Holborn-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
Kzin-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0331: Kzin-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Cobre-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Fair: small stones thin layer depth to rock
Jackpot-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock
0333: Kzin-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Holborn-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Onkeyo-----	Poor: slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
0340: Shuttle-----	Fair: cemented pan thin layer	Improbable: excess fines	Improbable: excess fines	Poor: excess salt small stones
Hardhat-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too sandy
Shuttle-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim excess salt small stones
0350: Jericho-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Jericho-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
0351: Shabliss-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
Eastwell-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
0355: Shabliss-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
0370: Toano-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: thin layer
Tulase-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
0371: Linoyer-----	Good	Improbable: excess fines	Improbable: excess fines	Good
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
0373: Timpie-----	Fair: low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Piltown-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: excess salt small stones
Linoyer-----	Good	Improbable: excess fines	Improbable: excess fines	Good
0374: Heist-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: area reclaim small stones
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
Zerk-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
0375: Toano-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: thin layer
Heist-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: area reclaim small stones
0380: Cobre-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Fair: small stones thin layer depth to rock
Izar-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
Jackpot-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock
0381: Cobre-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Fair: small stones thin layer depth to rock
Hundraw-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Jackpot-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: depth to rock

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
0382: Cobre-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Fair: small stones thin layer depth to rock
Enko-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
0390: Hardol-----	Poor: slope	Improbable: small stones	Probable	Poor: area reclaim slope small stones
Muiral-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Rubble Land----	Poor: large stones slope	Improbable: large stones small stones	Improbable: large stones	Poor: area reclaim slope small stones
0392: Hardol-----	Poor: slope	Improbable: small stones	Probable	Poor: area reclaim slope small stones
Muiral-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Onkeyo-----	Poor: slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
0400: Cleavage-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Cleavage-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
Sumine-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
410: Jericho-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim cemented pan small stones
411: Jericho-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim cemented pan small stones
Armespan-----	Good	Probable	Probable	Poor: area reclaim excess salt small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
0420: Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
0421: Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Automal-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
0422: Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Zimbob-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
0424: Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Hundraw-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
0426: Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Automal-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
Wintermute-----	Fair: large stones	Probable	Probable	Poor: area reclaim small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
0429: Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Automal-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
0430: Graley-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones too clayey depth to rock
Pioche-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones too clayey depth to rock
Cropper-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0431: Graley-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones too clayey depth to rock
Chen-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones too clayey depth to rock
McIvey-----	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too clayey
0440: Lomoin-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Bijorja-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Lomoin-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0460: Okan-----	Good	Probable	Probable	Poor: area reclaim small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Automal-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
Hundraw-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
0470: Rozara-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Cucamungo-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Rock Outcrop---	---	---	---	---
0471: Cucamungo-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Hendap-----	Poor: slope depth to rock	Improbable: thin layer	Improbable: thin layer	Poor: slope small stones depth to rock
Rock Outcrop---	---	---	---	---
0480: Shabliss-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
0485: Shabliss-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Parisa-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim small stones
Hunnton-----	Poor: cemented pan low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: small stones too clayey
0490: Wintermute-----	Fair: large stones	Probable	Probable	Poor: area reclaim small stones
Automal-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
0492: Wintermute-----	Fair: large stones	Probable	Probable	Poor: area reclaim small stones
Peeko-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones
Hundraw-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0494: Wintermute-----	Fair: large stones	Probable	Probable	Poor: area reclaim small stones
Pyrat-----	Good	Probable	Probable	Poor: area reclaim small stones
Automal-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
0496: Sodhouse-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones
Sodhouse-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones
Linoyer-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones
0497: Sodhouse-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones
Sodhouse-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones
Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
0501: Pharo-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
Izar-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
0503: Automal-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
Wintermute-----	Fair: large stones	Probable	Probable	Poor: area reclaim small stones
0504: Automal-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
Wintermute-----	Fair: large stones	Probable	Probable	Poor: area reclaim small stones
0510: Adobe-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Hardzem-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Haunchee-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0511: Adobe-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Wardbay-----	Poor: slope	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: area reclaim slope small stones
Hardol-----	Poor: slope	Improbable: small stones	Probable	Poor: area reclaim slope small stones
0512: Adobe-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Cavehill-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Wardbay-----	Poor: slope	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: area reclaim slope small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
0520: Haunchee-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Muiral-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Wardbay-----	Poor: slope	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: area reclaim slope small stones
0530: Wardbay-----	Poor: slope	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: area reclaim slope small stones
Adobe-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Haunchee-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0532: Onkeyo-----	Poor: slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
Pookaloo-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Tecomar-----	Poor: large stones depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
0540: Kunzler-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Sycomat-----	Good	Probable	Probable	Poor: area reclaim small stones
0541: Kunzler-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Sheffit-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
0550: Urmafot-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim cemented pan small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Bobs-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones
Urmafot-----	Poor: cemented pan slope	Improbable: small stones	Probable	Poor: area reclaim cemented pan small stones
0551: Urmafot-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim cemented pan small stones
Bobs-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones
552: Urmafot-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim cemented pan small stones
Pharo-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
0554: Urmafot-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim cemented pan small stones
Tecomar-----	Poor: large stones depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
Urmafot-----	Poor: cemented pan slope	Improbable: small stones	Probable	Poor: area reclaim cemented pan small stones
0561: Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Urmafot-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim cemented pan small stones
Palinor-----	Poor: cemented pan slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
0562: Bobs-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
0563: Bobs-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones
Pyrat-----	Good	Probable	Probable	Poor: area reclaim small stones
0575: Pookaloo-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Cavehill-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Rock Outcrop---	---	---	---	---
0576: Pookaloo-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Tecomar-----	Poor: large stones slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
Onkeyo-----	Poor: depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
0582: Sheffit-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
Sheffit-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
Katelana-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Fair: excess salt thin layer
0590: Upatad-----	Poor: large stones slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
Segura-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0600: Onkeyo-----	Poor: slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Amene-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Pookaloo-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0610: Wintermute-----	Fair: large stones	Probable	Probable	Poor: area reclaim small stones
Eastwell-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
0614: Wintermute-----	Fair: large stones	Probable	Probable	Poor: area reclaim small stones
Eastwell-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Zerk-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
0617: Wintermute-----	Fair: large stones	Probable	Probable	Poor: area reclaim small stones
Zerk-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
Loray-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones too sandy
0620: Atlow-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Atlow-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
0631: Eastwell-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Wintermute-----	Fair: large stones	Probable	Probable	Poor: area reclaim small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
0632: Eastwell-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Zafod-----	Fair: large stones	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
0634: Eastwell-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Shabliss-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Izar-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
0636: Eastwell-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Hundraw-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
0650: Mizpah-----	Poor: low strength shrink-swell depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Zerk-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
Wintermute-----	Fair: large stones	Probable	Probable	Poor: area reclaim small stones
0671: Idway-----	Good	Probable	Probable	Poor: area reclaim small stones
Mysol-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
0672: Idway-----	Good	Probable	Probable	Poor: area reclaim small stones
James Canyon----	Fair: shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: small stones
0680: Simon-----	Fair: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too clayey
Graley-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones too clayey depth to rock
Chen-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones too clayey depth to rock
0691: Tarnach-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Tarnach-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Wesfil-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0692: Tarnach-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Upata-----	Poor: slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
Wesfil-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0700: Shabliss-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Tulase-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones
Lincyer-----	Good	Improbable: excess fines	Improbable: excess fines	Good

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
0720: Mysol-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Mysol-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
0730: Idway-----	Good	Probable	Probable	Poor: area reclaim small stones
Kawich-----	Fair: slope	Improbable: excess fines	Improbable: excess fines	Poor: slope too sandy
Mysol-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
0733: Idway-----	Good	Probable	Probable	Poor: area reclaim small stones
Idway-----	Good	Probable	Probable	Poor: area reclaim small stones
Mysol-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
0740: Upatañ-----	Poor: large stones slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
Pioche-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones too clayey depth to rock
Tarnach-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0760: Playas-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey wetness
0761: Umberland-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey wetness
Umberland-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt too clayey
0762: Umberland-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey wetness

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Playas-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey wetness
0763: Equis-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt too clayey
Umberland-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt too clayey
Duffer-----	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
0764: Umberland-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt too clayey
Rubylake-----	Fair: low strength shrink-swell thin layer	Improbable: excess fines	Improbable: excess fines	Fair: excess salt
Orupa-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
0765: Umberland-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey wetness
Umberland-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt too clayey
Wendane-----	Fair: thin layer wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt
0767: Umberland-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt too clayey
Umberland-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey wetness
Orupa-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
0781: Mysol-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Benin-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
Wendane-----	Fair: thin layer wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt
0800: Mazuma-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too sandy
Toano-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: thin layer
0801: Mazuma-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too sandy
Zerk-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
0804: Mazuma-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too sandy
Kawich-----	Fair: slope	Improbable: excess fines	Improbable: excess fines	Poor: slope too sandy
Playas-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey wetness
0807: Mazuma-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too sandy
Kunzler-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Zerk-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
0823: Kunzler-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Pyrat-----	Good	Probable	Probable	Poor: area reclaim small stones
Blimo-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
0824: Kunzler-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Katelana-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Fair: excess salt thin layer
0827: Kunzler-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
James Canyon---	Fair: shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
James Canyon---	Fair: shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
0828: Kunzler-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Pyrat-----	Good	Probable	Probable	Poor: area reclaim small stones
Wendane-----	Fair: thin layer wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt
0830: Pharo-----	Poor: slope	Improbable: small stones	Probable	Poor: area reclaim slope small stones
Rzin-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Pharo-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
0842: Katelana-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Fair: excess salt thin layer
Timpie-----	Fair: low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
0843: Katelana-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Fair: excess salt thin layer
Kawich-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: too sandy
0845: Katelana-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Fair: excess salt thin layer
Ragtown-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Timpie-----	Fair: low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
0847: Mazuma-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too sandy
Blimo-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Wintermute-----	Fair: large stones	Probable	Probable	Poor: area reclaim small stones
0850: Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Wintermute-----	Fair: large stones	Probable	Probable	Poor: area reclaim small stones
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
0851: Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Zimbo-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Tecomar-----	Poor: large stones depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
0852: Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Pyrat-----	Good	Probable	Probable	Poor: area reclaim small stones
Shabliss-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
0854: Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Automal-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Shabliss-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
0856: Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Parisa-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: small stones
0857: Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Shabliss-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Linoyer-----	Good	Improbable: excess fines	Improbable: excess fines	Good
0858: Palinor-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Automal-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
Linoyer-----	Good	Improbable: excess fines	Improbable: excess fines	Good
0870: Theriot-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Zimbob-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0880: Duffer-----	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Duffer-----	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Kolda-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey wetness
0881: Duffer-----	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess salt

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Kunzler-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
0882: Duffer-----	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Kolda-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey wetness
0894: Zerk-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
Threeses-----	Good	Probable	Probable	Poor: area reclaim small stones
Mazuma-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too sandy
0900: Zerk-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
Automal-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
Linoyer-----	Good	Improbable: excess fines	Improbable: excess fines	Good
0910: Ragtown-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
Ragtown-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
0912: Katelana-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Fair: excess salt thin layer
Katelana-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Fair: excess salt thin layer
0914: Katelana-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Fair: excess salt thin layer
Benin-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
Sheffit-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
0917: Katelana-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Fair: excess salt thin layer
Sheffit-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
Ragtown-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
0918: Katelana-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Fair: excess salt thin layer
Zorravista-----	Good	Probable	Improbable: too sandy	Poor: too sandy
Playas-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey wetness
0930: Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
Toano-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: thin layer
Loray-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones too sandy
0932: Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
Pyrat-----	Good	Probable	Probable	Poor: area reclaim small stones
0941: Sheffit-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
Sheffit-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
Zorravista-----	Good	Probable	Improbable: too sandy	Poor: too sandy
0943: Sheffit-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
Umberland-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt too clayey

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
0960: Gravier-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
Zerk-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
0961: Gravier-----	Good	Probable	Probable	Poor: area reclaim small stones
Piltedown-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: excess salt small stones
Zerk-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
0972: Zimbob-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Zimbob-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Pookaloo-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0974: Zimbob-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Tecomar-----	Poor: large stones depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
Pookaloo-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0975: Zimbob-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Tecomar-----	Poor: large stones slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Tecomar-----	Poor: large stones slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
0980: Onkeyo-----	Poor: slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
Pockaloo-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Zimbob-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0990: Hyzen-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Zimbob-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
0991: Hyzen-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Cavehill-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Tecomar-----	Poor: large stones slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
1000: Pyrat-----	Good	Probable	Probable	Poor: area reclaim small stones
Zerk-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
1001: Pyrat-----	Good	Probable	Probable	Poor: area reclaim small stones
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Eastwell-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
1002: Threesee-----	Good	Probable	Probable	Poor: area reclaim small stones
Kunzler-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Threesee-----	Good	Probable	Probable	Poor: area reclaim small stones
1003: Pyrat-----	Good	Probable	Probable	Poor: area reclaim small stones
Hundraw-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Tulase-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones
1004: Pyrat-----	Good	Probable	Probable	Poor: area reclaim small stones
Parisa-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim small stones
Tulase-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones
1005: Pyrat-----	Good	Probable	Probable	Poor: area reclaim small stones
Zerk-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
Parisa-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim small stones
1006: Pyrat-----	Good	Probable	Probable	Poor: area reclaim small stones
Blimo-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
1007: Pyrat-----	Good	Probable	Probable	Poor: area reclaim small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Automal-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
Parisa-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim small stones
1009: Pyrat-----	Good	Probable	Probable	Poor: area reclaim small stones
Tulase-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones
Wintermute-----	Fair: large stones	Probable	Probable	Poor: area reclaim small stones
1020: Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
Eastwell-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim cemented pan small stones
Blimo-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
1023: Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
Katelana-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Fair: excess salt thin layer
1030: Segura-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Bullump-----	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
Hutchley-----	Poor: slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
1040: Segura-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Pioche-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones too clayey depth to rock
Chen-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones too clayey depth to rock
1061: Pioche-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones too clayey depth to rock
Cucamonga-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Rock Outcrop----	---	---	---	---
1070: Zafod-----	Fair: large stones	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
Automal-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
1080: Cotant-----	Poor: low strength shrink-swell depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones too clayey depth to rock
Segura-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
1111: Parisa-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim small stones
1120: Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
Automal-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
1150: Adobe-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Wardbay-----	Poor: slope	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: area reclaim slope small stones
Haunchee-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
1161: Pharo-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
Bobs-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: cemented pan small stones
Pookaloo-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
1171: Pyrat-----	Good	Probable	Probable	Poor: area reclaim small stones
Automal-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
Gravier-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
1172: Pyrat-----	Good	Probable	Probable	Poor: area reclaim small stones
Automal-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
Automal-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
1173: Pyrat-----	Good	Probable	Probable	Poor: area reclaim small stones
Automal-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones
1174: Pyrat-----	Good	Probable	Probable	Poor: area reclaim small stones
Tosser-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1180: Haunchee-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Cavehill-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
1181: Haunchee-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Halacan-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Wardbay-----	Poor: slope	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: area reclaim slope small stones
1190: Upatad-----	Poor: slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
Atlow-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Upatad-----	Poor: large stones slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
1191: Upatad-----	Poor: slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
Ploche-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones too clayey depth to rock
Rock Outcrop----	---	---	---	---
1200: Hardol-----	Poor: slope	Improbable: small stones	Probable	Poor: area reclaim slope small stones
Hardzem-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Rock Outcrop----	---	---	---	---

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1201: Hardol-----	Poor: slope	Improbable: small stones	Probable	Poor: area reclaim slope small stones
Rock Outcrop----	---	---	---	---
Wardbay-----	Poor: slope	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: area reclaim slope small stones
1210: Blimo-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Kunzler-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Linoyer-----	Good	Improbable: excess fines	Improbable: excess fines	Good
1213: Blimo-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Thresses-----	Good	Probable	Probable	Poor: area reclaim small stones
1215: Blimo-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Zorravista-----	Good	Probable	Improbable: too sandy	Poor: too sandy
1216: Blimo-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Idway-----	Good	Probable	Probable	Poor: area reclaim small stones
Mazuma-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too sandy
1220: Onkeyo-----	Poor: slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
Adobe-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Pockaloo-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1230: Hardzem-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Haunchee-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Wardbay-----	Poor: slope	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: area reclaim slope small stones
1240: Benin-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
Benin-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
1241: Benin-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
Playas-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey wetness
Benin-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
1250: Tecomar-----	Poor: large stones slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
Pookaloo-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
1270: Katelana-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Fair: excess salt thin layer
Sheffit-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
1271: Uvada-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt too clayey
Ragtown-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1272: Katelana-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Fair: excess salt thin layer
Kawich-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: too sandy
1280: Sycomat-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Kunzler-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
1281: Sycomat-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Mazuma-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too sandy
1290: Heist-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: area reclaim small stones
Blimo-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
1300: Cavehill-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Haunchee-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Hardzem-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
1360: Toba-----	Fair: wetness	Probable	Improbable: too sandy	Poor: too sandy
Appian-----	Good	Probable	Improbable: too sandy	Poor: excess sodium
1370: Crupa-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: too clayey
Playas-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey wetness
Boofuss-----	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey wetness

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1380: Hulderman-----	Fair: wetness	Probable	Improbable: too sandy	Fair: small stones thin layer
Toba-----	Fair: wetness	Probable	Improbable: too sandy	Poor: too sandy
Benin-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey
1390: Wendane-----	Fair: thin layer wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt
Mysol-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Toba-----	Fair: wetness	Probable	Improbable: too sandy	Poor: too sandy
1410: Threesee-----	Good	Probable	Probable	Poor: area reclaim small stones
Tosser-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
1411: Threesee-----	Good	Probable	Probable	Poor: area reclaim small stones
Linoyer-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones
Okan-----	Good	Probable	Probable	Poor: area reclaim small stones
1412: Threesee-----	Good	Probable	Probable	Poor: area reclaim small stones
Idway-----	Good	Probable	Probable	Poor: area reclaim small stones
1413: Idway-----	Good	Probable	Probable	Poor: area reclaim small stones
Zorravista-----	Good	Probable	Improbable: too sandy	Poor: too sandy
Kunzler-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
1414: Threesee-----	Good	Probable	Probable	Poor: area reclaim small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Shantown-----	Good	Probable	Probable	Poor: area reclaim small stones
Kunzler-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
1430: Pookaloo-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Tecomar-----	Poor: large stones slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
Rock Outcrop----	---	---	---	---
1440: Boofuss-----	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey wetness
Boofuss-----	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey wetness
Equis-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt too clayey
1441: Boofusa-----	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess salt too clayey wetness
Wendane-----	Fair: thin layer wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt
Umberland-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt too clayey
1450: Piltown-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: excess salt small stones
Kawich-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: too sandy
1460: Tosser-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
Threesee-----	Good	Probable	Probable	Poor: area reclaim small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1471: Timpie-----	Fair: low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Kunzler-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Threesee-----	Good	Probable	Probable	Poor: area reclaim small stones
1480: Tulase-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: small stones
Lincoyer-----	Good	Improbable: excess fines	Improbable: excess fines	Good
1500: Tocoele-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: excess salt small stones
Loray-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones too sandy
1510: Izamatch-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
Cliffdown-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim excess salt small stones
1520: Izamatch-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
Izamatch-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
Luning-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones too sandy
1521: Izamatch-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
Izamatch-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
Theriot-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1522: Izamatch-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
Smaug-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Badland-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt slope too clayey
1530: Theriot-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Theriot-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Izamatch-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
1531: Theriot-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Izamatch-----	Fair: slope	Probable	Probable	Poor: area reclaim small stones too sandy
Rock Outcrop----	---	---	---	---
1532: Theriot-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Theriot-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Rock Outcrop----	---	---	---	---
1540: Kyler-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Amtoft-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Amtoft-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
1541: Kyler-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Kyler-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones depth to rock
Rock Outcrop----	---	---	---	---
1542: Kyler-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Amtoft-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Jericho-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim cemented pan small stones
1550: Jericho-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim cemented pan small stones
Jericho-----	Poor: cemented pan slope	Improbable: small stones	Probable	Poor: area reclaim cemented pan small stones
1560: Toano-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: thin layer
Timpie-----	Fair: low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
1570: Jericho-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim cemented pan small stones
Xeric Torriorthents--	Fair: slope	Probable	Probable	Poor: area reclaim small stones too sandy
1580: Armespan-----	Good	Probable	Probable	Poor: area reclaim excess salt small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Jericho-----	Poor: cemented pan	Improbable: small stones	Probable	Poor: area reclaim cemented pan small stones
1581: Armespan-----	Good	Probable	Probable	Poor: area reclaim excess salt small stones
Kyler-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Heist-----	Good	Improbable: excess fines	Improbable: excess fines	Fair: area reclaim small stones
1582: Armespan-----	Good	Probable	Probable	Poor: area reclaim excess salt small stones
Xeric Torriorthents--	Fair: slope	Probable	Probable	Poor: area reclaim small stones too sandy
1590: Luning-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones too sandy
Luning-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones too sandy
Loray-----	Good	Improbable: small stones	Probable	Poor: area reclaim small stones too sandy
1591: Luning-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones too sandy
Izamatch-----	Good	Probable	Probable	Poor: area reclaim small stones too sandy
Badland-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt slope too clayey
1600: Eaglepass-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Amtoft-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
1610: Xeric Torriorthents--	Fair: slope	Probable	Probable	Poor: area reclaim small stones too sandy
Armespan-----	Good	Probable	Probable	Poor: area reclaim excess salt small stones
Badland-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope depth to rock
1620: Kolda-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey wetness
Duffer-----	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Sonoma-----	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Fair: too clayey
1621: Kolda-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey wetness
Rubylake-----	Fair: low strength shrink-swell thin layer	Improbable: excess fines	Improbable: excess fines	Fair: excess salt
Kolda-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey wetness
1622: Kolda-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey wetness
1623: Kolda-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey wetness
Water-----	---	---	---	---
1630: Pookaloo-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Cavehill-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Rock Outcrop----	---	---	---	---
1631: Pockaloo-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Tecomar-----	Poor: large stones slope depth to rock	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: slope small stones depth to rock
Wardbay-----	Poor: slope	Improbable: large stones excess fines	Improbable: large stones excess fines	Poor: area reclaim slope small stones
1640: Jungo-----	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
Jungo-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
1650: Shantown-----	Good	Probable	Probable	Poor: area reclaim small stones
Zorravista-----	Good	Probable	Improbable: too sandy	Poor: too sandy
1651: Shantown-----	Good	Probable	Probable	Poor: area reclaim small stones
Shantown-----	Good	Probable	Probable	Poor: area reclaim small stones
1660: Wendane-----	Fair: thin layer wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt
Logan-----	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Fair: too clayey
1670: Wendane-----	Fair: thin layer wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt
Logan-----	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Fair: too clayey
Wendane-----	Fair: thin layer wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1680: Rubylake-----	Fair: low strength shrink-swell thin layer	Improbable: excess fines	Improbable: excess fines	Fair: excess salt
Kolda-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey wetness
Wendane-----	Fair: thin layer wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt
1681: Wendane-----	Fair: thin layer wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt
Logan-----	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Fair: too clayey
Umberland-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt too clayey
1690: Krenka-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones
Secrapass-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too clayey
1700: Heechee-----	Fair: large stones	Improbable: large stones	Improbable: large stones	Poor: area reclaim small stones
Rubicity-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Heechee-----	Fair: large stones	Improbable: large stones	Improbable: large stones	Poor: area reclaim small stones
1702: Heechee-----	Fair: large stones	Improbable: large stones	Improbable: large stones	Poor: area reclaim small stones
McIvay-----	Fair: large stones low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too clayey
Rubicity-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: small stones
1710: James Canyon----	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Wendane-----	Fair: thin layer wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt
1711: James Canyon----	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
Wendane-----	Fair: thin layer wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt
Wendane-----	Fair: thin layer wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt
1720: Welch-----	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: wetness
1721: Welch-----	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: wetness
Welsum-----	Poor: wetness	Probable	Probable	Poor: area reclaim small stones too sandy
1722: Welch-----	Good	Probable	Probable	Poor: area reclaim
Slipback-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium small stones
Welch-----	Fair: wetness	Probable	Probable	Poor: area reclaim
1723: Welch-----	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: wetness
Welch-----	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Fair: small stones too clayey
1730: McIvey-----	Fair: large stones low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too clayey
Donna-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too clayey
1731: McIvey-----	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too clayey
Chen-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones too clayey depth to rock

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Donna-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim too clayey
1732: McIvey-----	Fair: large stones shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too clayey
Stampede-----	Poor: cemented pan low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: small stones too clayey
Heechee-----	Fair: large stones	Improbable: large stones	Improbable: large stones	Poor: area reclaim small stones
1740: Slipback-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium small stones
Welch-----	Good	Probable	Probable	Poor: area reclaim
1741: Slipback-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium small stones
Shantown-----	Good	Probable	Probable	Poor: area reclaim small stones
Toba-----	Fair: wetness	Probable	Improbable: too sandy	Poor: too sandy
1750: Heechee-----	Fair: large stones	Improbable: large stones	Improbable: large stones	Poor: area reclaim small stones
Welch-----	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: wetness
Welch-----	Poor: low strength	Improbable: excess fines	Improbable: excess fines	Fair: small stones too clayey
1760: Lykal-----	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Fair: area reclaim
Wendane-----	Fair: thin layer wetness	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt
James Canyon---	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: small stones
1770: Donna-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too clayey

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
McIvey-----	Fair: large stones low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too clayey
Heechee-----	Fair: large stones	Improbable: large stones	Improbable: large stones	Poor: area reclaim small stones
1780: Schoer-----	Good	Probable	Probable	Poor: area reclaim small stones too clayey
Welch-----	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: wetness
1790: Donna-----	Poor: cemented pan	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too clayey
Krenka-----	Fair: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
McIvey-----	Fair: large stones low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim small stones too clayey
1800: Chen-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones too clayey depth to rock
Graley-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones too clayey depth to rock
Rock Outcrop---	---	---	---	---
1810: Sumine-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Tusel-----	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
Hapgood-----	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
1820: Kussa-----	Poor: low strength wetness	Improbable: excess fines	Improbable: excess fines	Poor: wetness
Halleck-----	Fair: wetness	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
Welsum-----	Poor: wetness	Probable	Probable	Poor: area reclaim small stones too sandy
1831: Enko-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Kelk-----	Fair: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
Enko-----	Good	Improbable: excess fines	Improbable: excess fines	Poor: excess salt
1840: Amene-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Belsac-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones
Chen-----	Poor: depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: small stones too clayey depth to rock
1850: Bullump-----	Poor: slope	Improbable: excess fines	Improbable: excess fines	Poor: area reclaim slope small stones
Cleavage-----	Poor: slope depth to rock	Improbable: excess fines	Improbable: excess fines	Poor: slope small stones depth to rock
Rock Outcrop----	---	---	---	---
1861: Equis-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt too clayey
Devilsgait-----	Poor: wetness	Improbable: excess fines	Improbable: excess fines	Poor: wetness
1862: Equis-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt too clayey
Equis-----	Poor: low strength shrink-swell	Improbable: excess fines	Improbable: excess fines	Poor: excess sodium excess salt too clayey
Kolda-----	Poor: low strength shrink-swell wetness	Improbable: excess fines	Improbable: excess fines	Poor: too clayey wetness

TABLE 9.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Sand	Gravel	Topsoil
1870: Denied Access---	---	---	---	---
1880: Water-----	---	---	---	---

TABLE 10.--ENGINEERING INDEX PROPERTIES

[illegible]

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct					Pct	
Eastwell-----	In											
	0-5	gravelly sandy loam	SM	A-1, A-2, A-4	0	0-5	65-80	60-75	40-60	20-40	20-25	NP-5
	5-18	very gravelly loam, very gravelly sandy loam	GC-GM, GC, GM	A-1, A-2	0	0-10	40-60	35-50	20-40	10-30	20-35	NP-15
0071: Stewval-----	18-27	cemented			---	---	---	---	---	---	---	---
	27-60	very gravelly loam, very cobbly loam	GC-GM, GM	A-2, A-4	0-5	15-45	50-70	45-60	35-55	30-50	20-30	NP-10
0071: Stewval-----	0-2	very gravelly fine sandy loam	GC-GM	A-2	0	0-10	35-55	30-45	20-35	10-20	20-25	5-10
	2-6	extremely gravelly loam, very gravelly clay loam, very gravelly loam	GC	A-2	0-10	0-25	20-55	15-45	10-35	10-30	30-40	10-20
	6-10	unweathered bedrock			---	---	---	---	---	---	---	---
Wesfil-----	0-6	very channery loam	GC-GM	A-2	0	10-25	50-65	35-50	25-45	20-35	20-25	5-10
	6-10	unweathered bedrock			---	---	---	---	---	---	---	---
Rock Outcrop----	---	---	---	---	---	---	---	---	---	---	---	---
0080: Stewval-----	0-2	very gravelly fine sandy loam	GC-GM	A-2	0	0-10	35-55	30-45	20-35	10-20	20-25	5-10
	2-6	extremely gravelly loam, very gravelly clay loam, very gravelly loam	GC	A-2	0-10	0-25	20-55	15-45	10-35	10-30	30-40	10-20
	6-10	unweathered bedrock			---	---	---	---	---	---	---	---
0092: Wesfil-----	0-6	very channery loam	GC-GM	A-2	0	10-25	50-65	35-50	25-45	20-35	20-25	5-10
	6-10	unweathered bedrock			---	---	---	---	---	---	---	---
Wintermute-----	0-3	gravelly silt loam	GM, ML	A-4	0	0-10	60-85	50-75	45-65	35-60	15-25	NP-5
	3-15	gravelly silt loam, gravelly fine sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-65	30-50	15-25	NP-5
	15-53	stratified extremely cobbly loamy sand to very gravelly sandy loam	GM, GP-GM	A-1	0-15	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
	53-60	gravelly silty clay loam	CL, GC	A-6	0-10	0-10	60-85	50-75	45-70	45-65	30-40	10-15

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Okan-----	0-8	sandy loam	SM	A-2	0	0	90-95	85-95	50-60	25-35	15-25	NP-5
	8-38	sandy loam	SM	A-2	0	0-10	90-95	85-95	50-60	25-35	15-25	NP-5
	38-60	stratified extremely gravelly loamy sand to loamy sand	GM, GP-GM	A-1	0	0-15	30-45	25-40	10-30	5-15	---	NP
0098: Wesfil-----	0-6	very channery loam	GC-GM	A-2	0	10-25	50-65	35-50	25-45	20-35	20-25	5-10
	6-10	unweathered bedrock			---	---	---	---	---	---	---	---
Tarnach-----	0-3	very gravelly loam	GC, GC-GM	A-2	0	0-10	30-55	25-50	25-40	20-35	25-35	5-15
	3-12	very gravelly loam	GC, GC-GM	A-2	0	0-10	30-55	25-50	25-40	20-35	25-35	5-15
	12-16	unweathered bedrock			---	---	---	---	---	---	---	---
Wesfil-----	0-6	very channery loam	GC-GM	A-2	0	10-25	50-65	35-50	25-45	20-35	20-25	5-10
	6-10	unweathered bedrock			---	---	---	---	---	---	---	---
0099: Wesfil-----	0-6	very channery loam	GC-GM	A-2	0	10-25	50-65	35-50	25-45	20-35	20-25	5-10
	6-10	unweathered bedrock			---	---	---	---	---	---	---	---
Armespan-----	0-7	very gravelly sandy loam	GM	A-1	0	0-10	45-60	30-50	20-40	10-25	20-25	NP-5
	7-21	gravelly sandy loam, gravelly loam	GM, SM	A-2, A-4	0	0-10	55-85	50-75	35-60	25-45	20-25	NP-5
	21-32	very gravelly sandy loam, very gravelly coarse sandy loam	GM	A-1	0	0-10	40-60	35-50	20-40	10-25	20-25	NP-5
	32-60	very gravelly loamy coarse sand, very gravelly loamy sand	GM, GP-GM, SP-SM, SM	A-1	0	0-10	30-60	25-50	10-35	5-15	---	NP
Heist-----	0-4	silt loam	ML	A-4	0	0	90-100	85-100	70-90	50-70	15-25	NP-5
	4-40	fine sandy loam, sandy loam	SM	A-2, A-4	0	0	80-100	75-100	50-80	25-50	15-25	NP-5
	40-60	gravelly fine sandy loam, gravelly sandy loam	GM, SM	A-2, A-1, A-4	0	0	55-80	50-75	35-60	15-40	15-25	NP-5
0100: Benin-----	0-7	silt loam	CL-ML, ML	A-4	0	0	100	95-100	75-90	70-85	25-35	5-10
	7-60	clay, silty clay	CH, CL, MH	A-7	0	0	100	100	90-100	85-95	45-55	20-25
Mazuma-----	0-15	silt loam	ML	A-4	0	0	95-100	85-100	70-90	50-65	20-25	NP-5
	15-60	stratified gravelly coarse sand to silt loam	SM	A-4	0	0	95-100	80-100	70-90	35-50	20-25	NP-5

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct						
	In											
0101: Toano-----	0-9	silt loam	ML	A-4, A-5	0	0	100	95-100	85-100	85-100	30-50	NP-5
	9-27	silt loam, very fine sandy loam	ML	A-4, A-5	0	0	100	95-100	95-100	70-95	30-50	NP-5
	27-60	silt loam, very fine sandy loam	ML	A-4, A-5	0	0	100	95-100	95-100	70-95	30-50	NP-5
Linoyer-----	0-9	silt loam	CL-ML, ML	A-4	0	0	100	100	85-100	70-90	15-25	NP-10
	9-60	very fine sandy loam, silt loam	CL-ML, ML	A-4	0	0	100	100	95-100	80-95	15-25	NP-10
0103: Benin-----	0-7	silt loam	CL-ML, ML	A-4	0	0	100	95-100	75-90	70-85	25-35	5-10
	7-60	clay, silty clay	CH, CL, MH	A-7	0	0	100	100	90-100	85-95	45-55	20-25
Playas-----	0-6	silty clay loam	CL, CH, MH, ML	A-7	0	0	100	100	100	90-100	40-55	15-25
	6-60	silty clay loam, clay, silty clay	CL, CH, MH	A-7	0	0	100	100	100	90-100	45-75	20-40
0111: Gravier-----	0-3	very gravelly sandy loam	GM	A-1, A-2	0	0	40-65	35-50	25-40	10-30	15-25	NP-5
	3-60	stratified extremely gravelly coarse sandy loam to very gravelly loam	GM	A-1	0	0-15	30-55	25-50	15-35	10-25	15-25	NP-5
Armespan-----	0-7	very gravelly sandy loam	GM	A-1	0	0-10	45-60	30-50	20-40	10-25	20-25	NP-5
	7-21	gravelly sandy loam, gravelly loam	GM, SM	A-2, A-4	0	0-10	55-85	50-75	35-60	25-45	20-25	NP-5
	21-32	very gravelly sandy loam, very gravelly coarse sandy loam	GM	A-1	0	0-10	40-60	35-50	20-40	10-25	20-25	NP-5
	32-60	very gravelly loamy coarse sand, very gravelly loamy sand	GM, SP-SM, GP-GM, SM	A-1	0	0-10	30-60	25-50	10-35	5-15	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0113: Gravier-----	0-3	gravelly loam	GM, SM	A-4	0	0	65-80	55-75	45-65	35-50	15-25	NP-5
	3-44	stratified extremely gravelly coarse sandy loam to very gravelly loam	GM	A-1	0	0-15	30-55	25-50	15-35	10-25	15-25	NP-5
Gravier-----	0-3	very gravelly sandy loam	GM	A-1, A-2	0	0	40-65	35-50	25-40	10-30	15-25	NP-5
	3-60	stratified extremely gravelly coarse sandy loam to very gravelly loam	GM	A-1	0	0-15	30-55	25-50	15-35	10-25	15-25	NP-5
	44-60	stratified extremely gravelly loamy sand to gravelly loamy sand	GM, GP-GM	A-1	0	0-15	30-50	25-40	15-25	5-15	---	NP
Jericho-----	0-4	very gravelly loam	GC-GM	A-2	0	0	45-60	35-50	25-40	20-35	25-30	5-10
	4-14	very gravelly sandy loam	GM	A-1	0	0-10	40-60	30-50	20-40	10-25	20-25	NP-5
	14-28	indurated			---	---	---	---	---	---	---	---
	28-60	extremely gravelly loamy coarse sand	GP-GM	A-1	0	0	25-35	15-25	10-20	5-10	0-14	NP
0116: Gravier-----	0-3	gravelly loam	GM, SM	A-4	0	0	65-80	55-75	45-65	35-50	15-25	NP-5
	3-44	stratified extremely gravelly coarse sandy loam to very gravelly loam	GM	A-1	0	0-15	30-55	25-50	15-35	10-25	15-25	NP-5
	44-60	stratified extremely gravelly loamy sand to gravelly loamy sand	GM, GP-GM	A-1	0	0-15	30-50	25-40	15-25	5-15	---	NP
Izamatch-----	0-3	gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	55-80	50-75	30-50	15-30	15-25	NP-5
	3-13	gravelly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	40-80	35-75	25-50	20-35	15-25	NP-5
	13-22	very gravelly loamy sand, very gravelly sand, very gravelly loamy coarse sand	GM, GP-GM	A-1	0	0-5	30-55	25-50	15-30	5-15	---	NP
	22-60	stratified extremely gravelly coarse sand to very gravelly loamy sand	GM, GP, SP- SM, GP-GM	A-1	0	0-5	20-60	15-55	5-35	0-15	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct						
Loray-----	In											
	0-12	gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	60-80	55-75	45-60	20-30	20-25	NP-5
0118: Gravier-----	12-60	stratified extremely gravelly coarse sand to extremely gravelly loamy fine sand	GP, GP-GM	A-1	0	0-15	20-35	10-25	5-20	0-10	---	NP
	0-3	very gravelly sandy loam	GM	A-1, A-2	0	0	40-65	35-50	25-40	10-30	15-25	NP-5
Automal-----	3-60	stratified extremely gravelly coarse sandy loam to very gravelly loam	GM	A-1	0	0-15	30-55	25-50	15-35	10-25	15-25	NP-5
	0-8	gravelly silt loam	CL-ML, GC-GM, ML, GM	A-4	0-5	0-5	60-85	50-75	45-70	35-65	25-35	5-10
Zerk-----	8-49	very gravelly sandy loam, extremely gravelly sandy loam, very gravelly silt loam	GM, GC-GM, GP-GM	A-1, A-2	0-15	15-30	25-50	15-40	10-35	5-30	20-30	NP-10
	49-60	extremely gravelly loamy coarse sand, extremely gravelly coarse sandy loam	GP, GP-GM	A-1	0-10	0-5	25-35	15-25	5-15	0-10	15-25	NP-5
0119: Wintermute-----	0-2	gravelly sandy loam	GM, SM	A-1, A-2, A-4	0	0	55-80	50-75	40-60	20-40	20-25	NP-5
	2-16	gravelly loam, very gravelly loam	GM, SM	A-2, A-1, A-4	0	0-10	50-85	40-75	30-60	20-50	20-25	NP-5
0119: Wintermute-----	16-60	stratified extremely gravelly coarse sand to extremely gravelly loamy sand	GP, GP-GM	A-1	0	15-30	25-40	15-30	5-15	0-10	---	NP
	0-3	gravelly sandy loam	GM, ML, SM	A-2, A-4	0	0-10	60-85	50-75	40-65	30-55	20-25	NP-5
0119: Wintermute-----	3-15	gravelly silt loam, gravelly fine sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-65	30-50	15-25	NP-5
	15-53	stratified extremely cobbly loamy sand to very gravelly sandy loam	GM, GP-GM	A-1	0-15	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
0119: Wintermute-----	53-60	gravelly silty clay loam	CL, GC	A-6	0-10	0-10	60-85	50-75	45-70	45-65	30-40	10-15

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Linoyer-----	0-9	very fine sandy loam	ML	A-4	0	0	100	100	95-100	55-70	15-25	NP-10
	9-60	very fine sandy loam, silt loam	CL-ML, ML	A-4	0	0	100	100	95-100	80-95	15-25	NP-10
0120: Izamatsh-----	0-3	very gravelly sandy loam	GM, GP-GM	A-1	0	0-5	30-55	25-50	15-35	5-20	15-25	NP-5
	3-13	gravelly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	40-80	35-75	25-50	20-35	15-25	NP-5
	13-22	very gravelly loamy sand, very gravelly sand, very gravelly loamy coarse sand	GM, GP-GM	A-1	0	0-5	30-55	25-50	15-30	5-15	---	NP
	22-60	stratified extremely gravelly coarse sand to very gravelly loamy sand	GP, GP-GM, GM, SP-SM	A-1	0	0-5	20-60	15-55	5-35	0-15	---	NP
Arnespan-----	0-7	very gravelly sandy loam	GM	A-1	0	0-10	45-60	30-50	20-40	10-25	20-25	NP-5
	7-21	gravelly sandy loam, gravelly loam	GM, SM	A-2, A-4	0	0-10	55-85	50-75	35-60	25-45	20-25	NP-5
	21-32	very gravelly sandy loam, very gravelly coarse sandy loam	GM	A-1	0	0-10	40-60	35-50	20-40	10-25	20-25	NP-5
	32-60	very gravelly loamy coarse sand, very gravelly loamy sand	GP-GM, SM, GM, SP-SM	A-1	0	0-10	30-60	25-50	10-35	5-15	---	NP
Cliffdown-----	0-6	very gravelly sandy loam	GC-GM, GM	A-1, A-2	0	0-5	35-55	30-50	15-35	10-20	15-25	NP-10
	6-60	very gravelly sandy loam	GC-GM, GM	A-1, A-2	0	0-5	35-55	30-50	15-35	10-20	15-25	NP-10
0122: Gravier-----	0-3	gravelly loam	GM, SM	A-4	0	0	65-80	55-75	45-65	35-50	15-25	NP-5
	3-60	stratified extremely gravelly coarse sandy loam to very gravelly loam	GM	A-1	0	0-15	30-55	25-50	15-35	10-25	15-25	NP-5

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO	>10 inches Pct	3-10 inches Pct	4	10	40	200		
	In											
Tecomar-----	0-2	extremely cobbly silt loam	GC	A-2	0-15	30-60	25-45	20-40	15-40	10-35	25-35	10-15
	2-14	extremely stony silt loam, extremely cobbly silt loam, very cobbly silt loam	GC	A-2, A-6	0-30	30-60	25-60	20-45	15-40	10-40	25-35	10-15
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
0160: Saltair-----	0-11	silt loam	CL-ML	A-4	0	0	100	100	95-100	75-90	20-30	5-10
	11-60	silty clay loam, silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	75-95	20-40	5-20
Kawich-----	0-2	fine sand	SM	A-2	0	0	100	100	75-90	20-30	---	NP
	2-60	fine sand	SM	A-2	0	0	100	100	75-90	20-30	---	NP
0161: Saltair-----	0-11	silt loam	CL-ML	A-4	0	0	100	100	95-100	75-90	20-30	5-10
	11-60	silty clay loam, silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	75-95	20-40	5-20
Playas-----	0-6	silty clay	CH, CL, MH	A-7	0	0	100	100	100	90-100	45-75	20-40
	6-60	silty clay loam, clay, silty clay	CH, MH, CL	A-7	0	0	100	100	100	90-100	45-75	20-40
0171: Loray-----	0-12	gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	60-80	55-75	45-60	20-30	20-25	NP-5
	12-60	stratified extremely gravelly coarse sand to extremely gravelly loamy fine sand	GP, GP-GM	A-1	0	0-15	20-35	10-25	5-20	0-10	---	NP
Gravier-----	0-3	very gravelly sandy loam	GM	A-1, A-2	0	0	40-65	35-50	25-40	10-30	15-25	NP-5
	3-44	stratified extremely gravelly coarse sandy loam to very gravelly loam	GM	A-1	0	0-15	30-55	25-50	15-35	10-25	15-25	NP-5
	44-60	stratified extremely gravelly very gravelly loamy sand	GM, GP-GM	A-1	0	0-15	30-50	25-40	15-25	5-15	---	NP
Toano-----	0-9	very fine sandy loam	ML	A-4, A-5	0	0	100	95-100	85-100	60-80	30-50	NP-5
	9-27	silt loam, very fine sandy loam	ML	A-4, A-5	0	0	100	95-100	95-100	70-95	30-50	NP-5
	27-60	silt loam, very fine sandy loam	ML	A-4, A-5	0	0	100	95-100	95-100	70-95	30-50	NP-5

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0173: Cliffdown-----	0-6	very gravelly sandy loam	GC-GM, GM	A-1, A-2	0	0-5	35-55	30-50	15-35	10-20	15-25	NP-10
	6-60	very gravelly sandy loam	GC-GM, GM	A-1, A-2	0	0-5	35-55	30-50	15-35	10-20	15-25	NP-10
Armespan-----	0-7	very gravelly sandy loam	GM	A-1	0	0-10	45-60	30-50	20-40	10-25	20-25	NP-5
	7-21	gravelly sandy loam, gravelly loam	GM, SM	A-2, A-4	0	0-10	55-85	50-75	35-60	25-45	20-25	NP-5
	21-32	very gravelly sandy loam, very gravelly coarse sandy loam	GM	A-1	0	0-10	40-60	35-50	20-40	10-25	20-25	NP-5
	32-60	very gravelly loamy coarse sand, very gravelly loamy sand	GP-GM, GM, SM, SP-SM	A-1	0	0-10	30-60	25-50	10-35	5-15	---	NP
Izamatch-----	0-3	very gravelly sandy loam	GM, GP-GM	A-1	0	0-5	30-55	25-50	15-35	5-20	15-25	NP-5
	3-13	gravelly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	40-80	35-75	25-50	20-35	15-25	NP-5
	13-22	very gravelly loamy sand, very gravelly sand, very gravelly loamy coarse sand	GM, GP-GM	A-1	0	0-5	30-55	25-50	15-30	5-15	---	NP
	22-60	stratified extremely gravelly coarse sand to very gravelly loamy sand	GP, GP-GM, GM, SP-SM	A-1	0	0-5	20-60	15-55	5-35	0-15	---	NP
0174: Wintermute-----	0-3	gravelly silt loam	GM, ML	A-4	0	0-10	60-85	50-75	45-65	35-60	15-25	NP-5
	3-15	gravelly silt loam, gravelly fine sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-65	30-50	15-25	NP-5
	15-53	stratified extremely cobble loamy sand to very gravelly sandy loam	GM, GP-GM	A-1	0-15	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
	53-60	gravelly silty clay loam	CL, GC	A-6	0-10	0-10	60-85	50-75	45-70	45-65	30-40	10-15
Linoyer-----	0-9	silt loam	CL-ML, ML	A-4	0	0	100	100	85-100	70-90	15-25	NP-10
	9-60	very fine sandy loam, silt loam	CL-ML, ML	A-4	0	0	100	100	95-100	80-95	15-25	NP-10
Okan-----	0-8	sandy loam	SM	A-2	0	0	90-95	85-95	50-60	25-35	15-25	NP-5
	8-38	sandy loam	SM	A-2	0	0-10	90-95	85-95	50-60	25-35	15-25	NP-5
	38-60	stratified extremely gravelly loamy sand	GM, GP-GM	A-1	0	0-15	30-45	25-40	10-30	5-15	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0175: Loray-----	0-12	gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	60-80	55-75	45-60	20-30	20-25	NP-5
	12-60	stratified extremely gravelly coarse sand to extremely gravelly loamy fine sand	GP, GP-GM	A-1	0	0-15	20-35	10-25	5-20	0-10	---	NP
Wintermute-----	0-3	gravelly silt loam	GM, ML	A-4	0	0-10	60-85	50-75	45-65	35-60	15-25	NP-5
	3-15	gravelly silt loam, gravelly fine sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-65	30-50	15-25	NP-5
	15-53	stratified extremely cobbly loamy sand to very gravelly sandy loam	GM, GP-GM	A-1	0-15	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
	53-60	gravelly silty clay loam	CL, GC	A-6	0-10	0-10	60-85	50-75	45-70	45-65	30-40	10-15
0176: Loray-----	0-12	gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	60-80	55-75	45-60	20-30	20-25	NP-5
	12-60	stratified extremely gravelly coarse sand to extremely gravelly loamy fine sand	GP, GP-GM	A-1	0	0-15	20-35	10-25	5-20	0-10	---	NP
Zerk-----	0-2	gravelly loam	SM	A-4	0	0	70-85	60-75	45-60	35-50	20-25	NP-5
	2-16	gravelly loam, very gravelly loam	GM, SM	A-1, A-4, A-2	0	0-10	50-85	40-75	30-60	20-50	20-25	NP-5
	16-60	stratified extremely gravelly coarse sand to extremely gravelly loamy sand	GP, GP-GM	A-1	0	15-30	25-40	15-30	5-15	0-10	---	NP
Zerk-----	0-2	gravelly fine sandy loam	SM	A-2, A-4	0	0	65-85	55-75	45-65	30-50	20-25	NP-5
	2-16	gravelly loam, very gravelly loam	GM, SM	A-1, A-4, A-2	0	0-10	50-85	40-75	30-60	20-50	20-25	NP-5
	16-60	stratified extremely gravelly coarse sand to extremely gravelly loamy sand	GP, GP-GM	A-1	0	15-30	25-40	15-30	5-15	0-10	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct						
	In											
0181: Peeko-----	0-4	gravelly loam	GC-GM, GC, GM, SC-SM	A-4, A-6	0	0-5	60-80	50-75	45-65	35-50	20-35	NP-15
	4-10	very gravelly silt loam, very cobbly silt loam, gravelly silt loam	CL-ML, CL, GC, GC-GM	A-4, A-6	0	0-45	50-80	45-75	40-75	35-60	25-35	5-15
	10-30	indurated			---	---	---	---	---	---	---	---
Dewar-----	0-3	gravelly silt loam	GC, CL, SC	A-6	0	0-5	60-90	55-80	45-80	35-70	25-35	10-15
	3-13	gravelly silty clay loam, gravelly clay loam	CL, GC	A-6, A-7	0	0-10	65-90	60-80	55-80	45-75	35-45	15-20
	13-19	gravelly silt loam	CL, GC-GM, CL-ML, GC	A-4, A-6	0	0-10	65-90	60-80	55-80	40-70	25-35	5-15
	19-40	indurated			---	---	---	---	---	---	---	---
Peeko-----	0-4	gravelly loam	GC-GM, GC, GM, SC-SM	A-4, A-6	0	0-5	60-80	50-75	45-65	35-50	20-35	NP-15
	4-10	very gravelly silt loam, very cobbly silt loam, gravelly silt loam	CL, CL-ML, GC-GM, GC	A-4, A-6	0	0-45	50-80	45-75	40-75	35-60	25-35	5-15
	10-30	indurated			---	---	---	---	---	---	---	---
0182: Peeko-----	0-4	silt loam	CL, CL-ML	A-4, A-6	0	0-10	80-95	75-90	70-90	60-80	25-35	5-15
	4-10	very gravelly silt loam, very cobbly silt loam, gravelly silt loam	CL-ML, GC, CL, GC-GM	A-4, A-6	0	0-45	50-80	45-75	40-75	35-60	25-35	5-15
	10-30	indurated			---	---	---	---	---	---	---	---
Peeko-----	0-4	silt loam	CL, CL-ML	A-4, A-6	0	0-10	80-95	75-90	70-90	60-80	25-35	5-15
	4-10	very gravelly silt loam, very cobbly silt loam, gravelly silt loam	CL-ML, GC, CL, GC-GM	A-4, A-6	0	0-45	50-80	45-75	40-75	35-60	25-35	5-15
	10-30	indurated			---	---	---	---	---	---	---	---
Gance-----	0-5	very gravelly loam	GC	A-2, A-6	0	0-25	45-70	30-50	25-45	20-40	30-35	10-15
	5-20	very gravelly clay, very gravelly sandy clay, extremely gravelly clay	GC	A-2, A-7	0-5	0-30	40-70	20-55	15-55	10-40	40-60	20-35
	20-60	extremely gravelly sandy loam, very cobbly sandy loam, extremely gravelly loam	GC-GM, GP-GM, GM	A-1, A-4, A-2	0-5	15-55	25-60	20-55	10-50	5-40	20-30	NP-10

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct					Pct	
0183: Peeko-----	In											
	0-4	gravelly loam	GC-GM, GC, GM, SC-SM	A-4, A-6	0	0-5	60-80	50-75	45-65	35-50	20-35	NP-15
	4-10	very gravelly silt loam, very cobbly silt loam, gravelly silt loam	CL-ML, CL, GC, GC-GM	A-4, A-6	0	0-45	50-80	45-75	40-75	35-60	25-35	5-15
	10-30	indurated			---	---	---	---	---	---	---	---
Enko-----	0-2	fine sandy loam	SC-SM	A-4	0	0	95-100	85-100	60-75	35-50	20-30	5-10
	2-14	loam, sandy loam, fine sandy loam	CL-ML, SC-SM	A-4	0	0	95-100	85-100	60-90	35-70	20-30	5-10
	14-32	sandy loam, fine sandy loam, loam	CL-ML, SC-SM	A-2, A-4	0	0	85-100	75-100	60-90	30-65	20-25	5-10
	32-60	sandy loam, fine sandy loam, loam	CL-ML, SC-SM	A-2, A-4	0	0	85-100	75-100	60-90	30-65	20-25	5-10
Izar-----	0-3	very gravelly loam	GC	A-2	0	0-25	30-55	25-50	20-45	15-35	25-35	10-15
	3-12	very gravelly loam, extremely gravelly loam	GC	A-2	0	0-25	20-55	15-50	15-45	10-35	25-35	10-15
	12-16	unweathered bedrock			---	---	---	---	---	---	---	---
0185: Peeko-----	0-4	silt loam	CL, CL-ML	A-4, A-6	0	0-10	80-95	75-90	70-90	60-80	25-35	5-15
	0-4	silt loam	CL, CL-ML	A-4, A-6	0	0-10	80-95	75-90	70-90	60-80	25-35	5-15
	4-10	very gravelly silt loam, very cobbly silt loam, gravelly silt loam	CL-ML, CL, GC, GC-GM	A-4, A-6	0	0-45	50-80	45-75	40-75	35-60	25-35	5-15
	4-10	very gravelly silt loam, very cobbly silt loam, gravelly silt loam	CL, CL-ML, GC-GM, GC	A-4, A-6	0	0-45	50-80	45-75	40-75	35-60	25-35	5-15
	10-30	indurated			---	---	---	---	---	---	---	---
	10-30	indurated			---	---	---	---	---	---	---	---
Chiara-----	0-4	silt loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	4-11	very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	11-15	indurated			---	---	---	---	---	---	---	---
0186: Palinor-----	0-8	gravelly loam	GM, SM	A-4	0	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34	indurated			---	---	---	---	---	---	---	---
	34-60	stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	0	0-30	30-50	20-45	15-35	10-30	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Pharo-----	0-13	gravelly loam	GC-GM, SC-SM	A-4	0	0	55-80	50-75	40-60	35-50	25-30	5-10
	13-36	very gravelly loam, extremely gravelly sandy loam	GC-GM	A-2	0	0-5	25-40	20-35	15-30	10-20	20-30	5-10
	36-60	extremely gravelly coarse sand	GP, GP-GM	A-1	0	0-10	25-30	20-25	10-15	0-10	0-14	NP
Hundraw-----	0-5	gravelly fine sandy loam	GC-GM, GM, SM, SC-SM	A-1, A-2, A-4	0	0	60-80	55-75	40-60	20-40	20-30	NP-10
	5-10	fine sandy loam, loam	ML, CL-ML, SC-SM, SM	A-2, A-4	0	0	80-95	75-90	55-80	30-70	20-30	NP-10
	10-14	weathered bedrock			---	---	---	---	---	---	---	---
0187: Peeko-----	0-4	gravelly loam	GC-GM, GC, GM, SC-SM	A-4, A-6	0	0-5	60-80	50-75	45-65	35-50	20-35	NP-15
	4-10	very gravelly silt loam, very cobbly silt loam, gravelly silt loam	CL-ML, CL, GC, GC-GM	A-4, A-6	0	0-45	50-80	45-75	40-75	35-60	25-35	5-15
	10-30	indurated			---	---	---	---	---	---	---	---
Izar-----	0-1	very gravelly loam	GC	A-2	0	0-25	30-55	25-50	20-45	15-35	25-35	10-15
	1-10	very gravelly loam, extremely gravelly loam	GC	A-2	0	0-25	20-55	15-50	15-45	10-35	25-35	10-15
	10-14	unweathered bedrock			---	---	---	---	---	---	---	---
Izar-----	0-3	very gravelly loam	GC	A-2	0	0-25	30-55	25-50	20-45	15-35	25-35	10-15
	3-12	very gravelly loam, extremely gravelly loam	GC	A-2	0	0-25	20-55	15-50	15-45	10-35	25-35	10-15
	12-16	unweathered bedrock			---	---	---	---	---	---	---	---
0188: Palinor-----	0-8	very gravelly loam	GM	A-1, A-2	0	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34	indurated			---	---	---	---	---	---	---	---
	34-60	stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	0	0-30	30-50	20-45	15-35	10-30	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth In	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct						
0203: Tecomar-----	0-2	extremely gravelly loam	GC	A-2	0	5-30	20-35	15-30	10-25	10-20	25-35	10-15
	2-14	extremely cobblely silt loam, very cobblely silt loam	GC	A-2, A-6	0-15	45-60	35-55	20-45	15-40	10-40	25-35	10-15
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
Pookaloo-----	0-2	very gravelly loam	GM	A-2	0	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	2-14	very gravelly loam, very gravelly silt loam	GM	A-2, A-4	0	0	50-60	35-50	35-45	25-40	20-25	NP-5
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
Pharo-----	0-13	gravelly loam	GC-GM, SC-SM	A-4	0	0	55-80	50-75	40-60	35-50	25-30	5-10
	13-36	very gravelly loam, extremely gravelly sandy loam	GC-GM	A-2	0	0-5	25-40	20-35	15-30	10-20	20-30	5-10
	36-60	extremely gravelly coarse sand	GP, GP-GM	A-1	0	0-10	25-30	20-25	10-15	0-10	0-14	NP
0210: Mazuma-----	0-15	silt loam	ML	A-4	0	0	95-100	85-100	70-90	50-65	20-25	NP-5
	15-60	stratified gravelly coarse sand to silt loam	SM	A-4	0	0	95-100	80-100	70-90	35-50	20-25	NP-5
Hardhat-----	0-9	silt loam	ML	A-4	0	0	80-100	75-100	70-95	55-80	15-25	NP-5
	9-19	silt loam, very fine sandy loam	ML	A-4	0	0	80-100	75-100	70-95	50-80	15-25	NP-5
	19-40	stratified gravelly sand to silt loam	SM	A-2, A-1, A-4	0	0	70-95	60-90	35-85	20-50	15-25	NP-5
	40-60	stratified very gravelly sandy loam to very fine sandy loam	GM, SM	A-2, A-1, A-4	0	0	55-85	45-75	35-65	20-45	15-25	NP-5
Loray-----	0-12	gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	60-80	55-75	45-60	20-30	20-25	NP-5
	12-60	stratified extremely gravelly coarse sand to extremely gravelly loamy fine sand	GP, GP-GM	A-1	0	0-15	20-35	10-25	5-20	0-10	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0211: Valmy-----	0-9	silt loam	CL	A-6	0	0	95-100	90-100	70-90	60-85	25-35	10-15
	9-40	fine sandy loam, loam	CL-ML, SC-SM	A-4	0	0	90-100	85-100	50-85	35-60	15-25	5-10
	40-61	stratified very fine sandy loam to gravelly silt loam	SC-SM	A-4	0	0	75-100	60-90	45-75	35-50	15-25	5-10
Enko-----	0-2	fine sandy loam	SC-SM	A-4	0	0	95-100	85-100	60-75	35-50	20-30	5-10
	2-14	loam, sandy loam, fine sandy loam	CL-ML, SC-SM	A-4	0	0	95-100	85-100	60-90	35-70	20-30	5-10
	14-32	sandy loam, fine sandy loam, loam	CL-ML, SC-SM	A-2, A-4	0	0	85-100	75-100	60-90	30-65	20-25	5-10
	32-60	sandy loam, fine sandy loam, loam	CL-ML, SC-SM	A-2, A-4	0	0	85-100	75-100	60-90	30-65	20-25	5-10
0230: Zafod-----	0-7	extremely stony loam	GC-GM	A-2	25-40	15-25	25-50	20-40	15-35	10-25	25-30	5-10
	7-28	very cobbly coarse sandy loam	SM	A-1	5-10	25-45	60-80	50-70	25-40	15-25	15-25	NP-5
	28-38	cemented			---	---	---	---	---	---	---	---
	38-60	very gravelly coarse sand	GM, SM	A-1	0-10	0-10	50-65	30-45	15-30	10-20	---	NP
Pyrat-----	0-6	very stony sandy loam	GM	A-1, A-2	5-25	0-10	40-55	35-50	25-45	15-30	15-25	NP-5
	6-14	very gravelly sandy loam	GM	A-1	0	0	40-60	25-50	20-40	10-25	15-25	NP-5
	14-21	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	25-50	20-45	15-35	15-25	NP-5
	21-42	very gravelly sandy loam	GM	A-1	0	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	42-60	stratified extremely gravelly loamy sand to very gravelly coarse sandy loam	GP, GM, GP-GM	A-1	0	0-15	15-50	10-45	5-35	0-15	---	NP
Palinor-----	0-8	very gravelly loam	GM	A-1, A-2	0	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34	indurated			---	---	---	---	---	---	---	---
	34-60	stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	0	0-30	30-50	20-45	15-35	10-30	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Kzin-----	0-3	very gravelly loam	GC	A-2, A-6	0	0-15	40-50	35-50	30-45	25-40	25-35	10-15
	3-9	very gravelly sandy loam, very gravelly loam	GC, GC-GM	A-2, A-6, A-4	0	0-15	40-50	35-50	25-45	15-40	25-35	5-15
	9-13	weathered bedrock			---	---	---	---	---	---	---	---
0242: Cobre-----	0-7	silt loam	ML	A-4	0	0	85-100	75-100	70-95	55-85	30-40	5-10
	7-15	silt loam, loam, very fine sandy loam	ML, SM	A-4	0	0	85-100	75-100	65-95	45-85	30-40	5-10
	15-34	loam, fine sandy loam, sandy loam	ML, SM	A-4	0	0	85-100	75-100	45-90	35-70	25-30	NP-5
	34-38	weathered bedrock			---	---	---	---	---	---	---	---
Hundraw-----	0-5	gravelly fine sandy loam	GM, GC-GM, SC-SM, SM	A-1, A-4, A-2	0	0	60-80	55-75	40-60	20-40	20-30	NP-10
	5-10	fine sandy loam, loam	CL-ML, SM, ML, SC-SM	A-2, A-4	0	0	80-95	75-90	55-80	30-70	20-30	NP-10
	10-14	weathered bedrock			---	---	---	---	---	---	---	---
Chiara-----	0-4	silt loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	4-11	very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	11-15	indurated			---	---	---	---	---	---	---	---
0244: Hundraw-----	0-5	gravelly fine sandy loam	GC-GM, GM, SM, SC-SM	A-1, A-4, A-2	0	0	60-80	55-75	40-60	20-40	20-30	NP-10
	5-10	fine sandy loam, loam	CL-ML, SM, ML, SC-SM	A-2, A-4	0	0	80-95	75-90	55-80	30-70	20-30	NP-10
	10-14	weathered bedrock			---	---	---	---	---	---	---	---
Shabliss-----	0-2	gravelly fine sandy loam	SM	A-2, A-4	0	0	68-85	55-75	50-65	25-45	20-25	NP-5
	2-15	loam, very fine sandy loam	ML	A-4	0	0	95-100	90-100	85-95	50-65	15-20	NP-5
	15-31	cemented			---	---	---	---	---	---	---	---
	31-60	very gravelly loamy sand	GM	A-1	0	0-15	35-55	30-50	15-30	10-20	---	NP
Palinor-----	0-8	gravelly loam	GM, SM	A-4	0	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34 34-60	indurated stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	---	---	---	---	---	---	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Dewar-----	0-3	gravelly silt loam	GC, CL, SC	A-6	0	0-5	60-90	55-80	45-80	35-70	25-35	10-15
	3-13	gravelly silty clay loam, gravelly clay loam	CL, GC	A-6, A-7	0	0-10	65-90	60-80	55-80	45-75	35-45	15-20
	13-19	gravelly silt loam	CL, GC-GM, CL-ML, GC	A-4, A-6	0	0-10	65-90	60-80	55-80	40-70	25-35	5-15
	19-40	indurated			---	---	---	---	---	---	---	---
Enko-----	0-2	fine sandy loam	SC-SM	A-4	0	0	95-100	85-100	60-75	35-50	20-30	5-10
	2-14	loam, sandy loam, fine sandy loam	CL-ML, SC-SM	A-4	0	0	95-100	85-100	60-90	35-70	20-30	5-10
	14-32	sandy loam, fine sandy loam, loam	CL-ML, SC-SM	A-2, A-4	0	0	85-100	75-100	60-90	30-65	20-25	5-10
	32-60	sandy loam, fine sandy loam, loam	CL-ML, SC-SM	A-2, A-4	0	0	85-100	75-100	60-90	30-65	20-25	5-10
0276: Chiara-----	0-4	silt loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	4-11	very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	11-15	indurated			---	---	---	---	---	---	---	---
Peeko-----	0-4	gravelly loam	GC, GC-GM, SC-SM, GM	A-4, A-5	0	0-5	60-80	50-75	45-65	35-50	20-35	NP-15
	4-10	very gravelly silt loam, very cobbly silt loam, gravelly silt loam	CL, GC-GM, CL-ML, GC	A-4, A-6	0	0-45	50-80	45-75	40-75	35-60	25-35	5-15
	10-30	indurated			---	---	---	---	---	---	---	---
Urmafot-----	0-7	gravelly loam	GM, ML	A-2, A-4	0	0	60-80	50-75	40-65	30-60	25-35	NP-5
	7-16	gravelly loam	GM, ML	A-2, A-4	0	0	60-80	50-75	40-65	30-60	25-35	NP-5
	16-29	indurated			---	---	---	---	---	---	---	---
	29-60	stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam	GM, GP-GM, GP	A-1	0-10	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
0279: Chiara-----	0-4	silt loam	ML	A-4	0	0	95-100	90-100	85-95	70-80	25-35	NP-5
	4-11	very fine sandy loam, loam, silt loam	ML	A-4	0	0	95-100	90-100	80-95	70-80	25-35	NP-5
	11-15	indurated			---	---	---	---	---	---	---	---
Parisa-----	0-5	gravelly loam	GM, SM	A-2, A-4	0	0-10	60-85	50-75	40-65	30-50	20-30	NP-5
	5-36	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0-10	35-60	25-50	20-40	15-35	20-30	NP-5
	36-55	indurated			---	---	---	---	---	---	---	---
	55-60	extremely gravelly coarse sandy loam	GP, GP-GM	A-1	0	0-15	15-35	10-25	5-15	0-10	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Enko-----	0-2	loam	CL-ML	A-4	0	0	95-100	85-100	75-100	50-70	20-30	5-10
	2-14	loam, sandy loam, fine sandy loam	CL-ML, SC-SM	A-4	0	0	95-100	85-100	60-90	35-70	20-30	5-10
	14-32	sandy loam, fine sandy loam, loam	CL-ML, SC-SM	A-4	0	0	95-100	85-100	75-90	40-65	20-25	5-10
	32-60	sandy loam, fine sandy loam, loam	CL-ML, SC-SM	A-2, A-4	0	0	85-100	75-100	60-90	30-65	20-25	5-10
0280: Oupico-----	0-4	loam	ML, SM	A-4	0	0	95-100	95-100	85-90	45-75	20-25	NP-5
	4-25	gravelly loam, loam, sandy loam	ML, SM	A-2, A-4	0	0	65-95	60-90	45-80	25-65	15-25	NP-5
	25-49	indurated			---	---	---	---	---	---	---	---
	49-62	stratified sandy loam to very fine sandy loam	ML, SM	A-4	0	0	80-95	75-95	70-80	40-55	---	NP
Enko-----	0-14	loam	CL-ML, ML	A-4	0	0	90-100	85-100	75-95	50-75	15-25	NP-10
	14-53	loam, fine sandy loam, sandy loam	CL-ML, ML, SM, SC-SM	A-4	0	0	90-100	85-100	50-90	35-70	15-25	NP-10
	53-63	very gravelly loamy sand, very gravelly sand, extremely gravelly sand	GP, GP-GM	A-1	0-5	0-20	30-55	25-45	15-25	0-10	---	NP
0282: Shabliss-----	0-2	gravelly fine sandy loam	SM	A-2, A-4	0	0	68-85	55-75	50-65	25-45	20-25	NP-5
	2-15	loam, very fine sandy loam	ML	A-4	0	0	95-100	90-100	85-95	50-65	15-20	NP-5
	15-31	cemented			---	---	---	---	---	---	---	---
	31-60	very gravelly loamy sand	GM	A-1	0	0-15	35-55	30-50	15-30	10-20	---	NP
Pyrat-----	0-6	gravelly sandy loam	GM, SM	A-2, A-4	0	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-14	very gravelly sandy loam	GM	A-1	0	0	40-60	25-50	20-40	10-25	15-25	NP-5
	14-21	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	25-50	20-45	15-35	15-25	NP-5
	21-42	very gravelly sandy loam	GM	A-1	0	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	42-60	stratified extremely gravelly loamy sand to very gravelly coarse sandy loam	GM, GP, GP-GM	A-1	0	0-15	15-50	10-45	5-35	0-15	---	NP
Okan-----	0-8	sandy loam	SM	A-2	0	0	90-95	85-95	50-60	25-35	15-25	NP-5
	8-38	sandy loam	SM	A-2	0	0-10	90-95	85-95	50-60	25-35	15-25	NP-5
	38-60	stratified extremely gravelly loamy sand	GM, GP-GM	A-1	0	0-15	30-45	25-40	10-30	5-15	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Cobre-----	0-7	silt loam	ML	A-4	0	0	85-100	75-100	70-95	55-85	30-40	5-10
	7-15	silt loam, loam, very fine sandy loam	ML, SM	A-4	0	0	85-100	75-100	65-95	45-85	30-40	5-10
	15-34	loam, fine sandy loam, sandy loam	ML, SM	A-4	0	0	85-100	75-100	45-90	35-70	25-30	NP-5
	34-38	weathered bedrock			---	---	---	---	---	---	---	---
Jackpot-----	0-4	sandy loam	SM	A-2, A-5	0	0	80-100	75-100	45-70	25-40	40-60	NP-5
	4-11	sandy loam	SM	A-2, A-5	0	0	80-100	75-100	45-70	25-40	40-60	NP-5
	11-15	weathered bedrock			---	---	---	---	---	---	---	---
0333: Kzin-----	0-3	very gravelly loam	GC	A-2, A-6	0	0-15	40-50	35-50	30-45	25-40	25-35	10-15
	3-8	very gravelly sandy loam, very gravelly loam	GC, GC-GM	A-2, A-6, A-4	0	0-15	40-50	35-50	25-45	15-40	25-35	5-15
	8-12	weathered bedrock			---	---	---	---	---	---	---	---
Holborn-----	0-3	gravelly loam	CL, GC	A-6	0	0-10	55-80	50-75	45-65	35-55	25-35	10-15
	3-7	gravelly clay loam, gravelly loam	CL, GC	A-6	0	0-10	60-80	50-75	45-70	35-60	25-35	10-15
	7-17	weathered bedrock			---	---	---	---	---	---	---	---
Onkeyo-----	0-8	very gravelly silt loam	GC	A-2, A-6	0	0-15	40-65	30-55	25-50	20-45	25-35	10-15
	8-17	extremely cobble silty clay loam, very cobbly silty clay loam	GM, SM	A-2, A-7, A-6	0-10	35-60	55-75	20-50	20-50	15-45	35-45	10-15
	17-21	unweathered bedrock			---	---	---	---	---	---	---	---
0340: Shuttle-----	0-6	silt loam	ML	A-4	0	0	80-100	75-95	65-80	55-75	15-25	NP-5
	6-19	silt loam, very fine sandy loam, gravelly silt loam	ML	A-4	0	0	80-100	70-90	60-80	50-75	15-25	NP-5
	19-45	very fine sandy loam, silt loam, gravelly silt loam	ML	A-4	0	0	80-100	70-90	60-80	50-75	15-25	NP-5
	45-60	indurated			---	---	---	---	---	---	---	---
Hardhat-----	0-9	silt loam	ML	A-4	0	0	80-100	75-100	70-95	55-80	15-25	NP-5
	9-19	silt loam, very fine sandy loam	ML	A-4	0	0	80-100	75-100	70-95	50-80	15-25	NP-5
	19-40	stratified gravelly sand to silt loam	SM	A-1, A-4, A-2	0	0	70-95	60-90	35-85	20-50	15-25	NP-5
	40-60	stratified very gravelly sandy loam to very fine sandy loam	GM, SM	A-1, A-4, A-2	0	0	55-85	45-75	35-65	20-45	15-25	NP-5

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Shuttle-----	0-5	silt loam	ML	A-4	0	0	80-100	75-95	65-80	55-75	15-25	NP-5
	5-15	silt loam, very fine sandy loam, gravelly silt loam	ML	A-4	0	0	80-100	70-90	60-80	50-75	15-25	NP-5
	15-42	very fine sandy loam, silt loam, gravelly silt loam	ML	A-4	0	0	80-100	70-90	60-80	50-75	15-25	NP-5
	42-61	stratified very gravelly sandy loam to fine sandy loam	GM, SM	A-1, A-2	0	0	55-85	45-75	30-60	20-35	15-25	NP-5
0350: Jericho-----	0-4	gravelly sandy loam	GM, SM	A-1, A-2	0	0-15	55-80	50-75	30-55	15-35	15-20	NP-5
	4-14	very gravelly sandy loam, very gravelly fine sandy loam	GM	A-1	0	0-25	40-55	30-50	20-40	10-25	15-20	NP-5
	14-28	indurated			---	---	---	---	---	---	---	---
	28-60	gravelly sandy loam, very gravelly sandy loam	GM	A-1, A-2	0	0-15	45-85	35-75	20-55	10-30	0-14	NP
Jericho-----	0-4	silt loam	ML	A-4	0	0	80-95	75-90	70-80	60-70	15-20	NP-5
	4-14	very gravelly sandy loam, very gravelly fine sandy loam	GM	A-1	0	0-25	40-55	30-50	20-40	10-25	15-20	NP-5
	14-28	indurated			---	---	---	---	---	---	---	---
	28-60	gravelly sandy loam, very gravelly sandy loam	GM	A-1, A-2	0	0-15	45-85	35-75	20-55	10-30	0-14	NP
0351: Shabliss-----	0-2	gravelly fine sandy loam	SM	A-2, A-4	0	0	68-85	55-75	50-65	25-45	20-25	NP-5
	2-15	loam, very fine sandy loam	ML	A-4	0	0	95-100	90-100	85-95	50-65	15-20	NP-5
	15-31	cemented			---	---	---	---	---	---	---	---
	31-60	very gravelly loamy sand	GM	A-1	0	0-15	35-55	30-50	15-30	10-20	---	NP
Okan-----	0-8	sandy loam	SM	A-2	0	0	90-95	85-95	50-60	25-35	15-25	NP-5
	8-38	sandy loam	SM	A-2	0	0-10	90-95	85-95	50-60	25-35	15-25	NP-5
	38-60	stratified extremely gravelly loamy sand	GM, GP-GM	A-1	0	0-15	30-45	25-40	10-30	5-15	---	NP
Eastwell-----	0-5	gravelly sandy loam	SM	A-1, A-2, A-4	0	0-5	65-80	60-75	40-60	20-40	20-25	NP-5
	5-18	very gravelly loam, very gravelly sandy loam	GC-GM, GC, GM	A-1, A-2	0	0-10	40-60	35-50	20-40	10-30	20-35	NP-15
	18-27	cemented			---	---	---	---	---	---	---	---
	27-60	very gravelly loam, very cobbly loam	GC-GM, GM	A-2, A-4	0-5	15-45	50-70	45-60	35-55	30-50	20-30	NP-10

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0355: Shabliss-----	0-2	gravelly fine sandy loam	SM	A-2, A-4	0	0	68-85	55-75	50-65	25-45	20-25	NP-5
	2-15	loam, very fine sandy loam	ML	A-4	0	0	95-100	90-100	85-95	50-65	15-20	NP-5
	15-31	cemented			---	---	---	---	---	---	---	---
	31-60	very gravelly loamy sand	GM	A-1	0	0-15	35-55	30-50	15-30	10-20	---	NP
Okan-----	0-8	sandy loam	SM	A-2	0	0	90-95	85-95	50-60	25-35	15-25	NP-5
	8-38	sandy loam	SM	A-2	0	0-10	90-95	85-95	50-60	25-35	15-25	NP-5
	38-60	stratified extremely gravelly loamy sand	GM, GP-GM	A-1	0	0-15	30-45	25-40	10-30	5-15	---	NP
Okan-----	0-8	sandy loam	SM	A-2	0	0	90-95	85-95	50-60	25-35	15-25	NP-5
	8-38	sandy loam	SM	A-2	0	0-10	90-95	85-95	50-60	25-35	15-25	NP-5
	38-60	stratified extremely gravelly loamy sand	GM, GP-GM	A-1	0	0-15	30-45	25-40	10-30	5-15	---	NP
0370: Toano-----	0-9	silt loam	ML	A-4, A-5	0	0	100	95-100	85-100	85-100	30-50	NP-5
	9-27	silt loam, very fine sandy loam	ML	A-4, A-5	0	0	100	95-100	95-100	70-95	30-50	NP-5
	27-60	silt loam, very fine sandy loam	ML	A-4, A-5	0	0	100	95-100	95-100	70-95	30-50	NP-5
Tulase-----	0-2	very fine sandy loam	CL-ML, ML	A-4	0	0	100	100	95-100	60-70	15-25	NP-10
	2-60	very fine sandy loam, silt loam	CL-ML, ML	A-4	0	0	95-100	90-100	85-100	70-85	15-25	NP-10
0371: Linoyer-----	0-9	silt loam	CL-ML, ML	A-4	0	0	100	100	85-100	70-90	15-25	NP-10
	9-60	very fine sandy loam, silt loam	CL-ML, ML	A-4	0	0	100	100	95-100	80-95	15-25	NP-10
Okan-----	0-8	sandy loam	SM	A-2	0	0	90-95	85-95	50-60	25-35	15-25	NP-5
	8-38	sandy loam	SM	A-2	0	0-10	90-95	85-95	50-60	25-35	15-25	NP-5
	38-60	stratified extremely gravelly loamy sand	GM, GP-GM	A-1	0	0-15	30-45	25-40	10-30	5-15	---	NP
0373: Timpie-----	0-8	silt loam	CL-ML	A-4	0	0	100	100	95-100	65-95	25-30	5-10
	8-19	silt loam	CL-ML	A-4	0	0	100	100	95-100	80-95	25-30	5-10
	19-60	silt loam	CL-ML	A-4	0	0	100	100	95-100	80-95	25-30	5-10
Piltown-----	0-10	fine sandy loam	SM	A-4	0	0	95-100	95-100	70-80	35-50	20-25	NP-5
	10-60	fine sandy loam, sandy loam, very fine sandy loam	SM	A-2, A-4	0	0	75-100	75-100	50-90	30-50	20-25	NP-5
Linoyer-----	0-9	silt loam	CL-ML, ML	A-4	0	0	100	100	85-100	70-90	15-25	NP-10
	9-60	very fine sandy loam, silt loam	CL-ML, ML	A-4	0	0	100	100	95-100	80-95	15-25	NP-10

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct						
410: Jericho-----	In											
	0-4	very gravelly loam	GC-GM	A-2	0	0	45-60	35-50	25-40	20-35	25-30	5-10
	4-14	very gravelly sandy loam	GM	A-1	0	0-10	40-60	30-50	20-40	10-25	20-25	NP-5
	14-28 28-60	indurated extremely gravelly loamy coarse sand	GP-GM	A-1	---	---	---	---	---	---	---	---
411: Jericho-----	0-4	very gravelly loam	GC-GM	A-2	0	0	45-60	35-50	25-40	20-35	25-30	5-10
	4-14	very gravelly sandy loam	GM	A-1	0	0-10	40-60	30-50	20-40	10-25	20-25	NP-5
	14-28 28-60	indurated extremely gravelly loamy coarse sand	GP-GM	A-1	---	---	---	---	---	---	---	---
					0	0	25-35	15-25	10-20	5-10	0-14	NP
Armespan-----	0-7	very gravelly sandy loam	GM	A-1	0	0-10	45-60	30-50	20-40	10-25	20-25	NP-5
	7-21	gravelly sandy loam, gravelly loam	GM, SM	A-2, A-4	0	0-10	55-85	50-75	35-60	25-45	20-25	NP-5
	21-32	very gravelly sandy loam, very gravelly coarse sandy loam	GM	A-1	0	0-10	40-60	35-50	20-40	10-25	20-25	NP-5
	32-60	very gravelly loamy coarse sand, very gravelly loamy sand	GP-GM, GM, SM, SP-SM	A-1	0	0-10	30-60	25-50	10-35	5-15	---	NP
0420: Palinor-----	0-8	very gravelly loam	GM	A-1, A-2	0	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34 34-60	indurated stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	---	---	---	---	---	---	---	---
					0	0-30	30-50	20-45	15-35	10-30	---	NP
Palinor-----	0-8	very gravelly loam	GM	A-1, A-2	0	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34 34-60	indurated stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	---	---	---	---	---	---	---	---
					0	0-30	30-50	20-45	15-35	10-30	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0421: Palinor-----	0-8	very gravelly loam	GM	A-1, A-2	0	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34	indurated			---	---	---	---	---	---	---	---
	34-60	stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	0	0-30	30-50	20-45	15-35	10-30	---	NP
Automal-----	0-8	gravelly silt loam	CL-ML, GC-GM, ML, GM	A-4	0-5	0-5	60-85	50-75	45-70	35-65	25-35	5-10
	8-49	very gravelly sandy loam, extremely gravelly sandy loam, very gravelly silt loam	GC-GM, GM, GP-GM	A-1, A-2	0-15	15-30	25-50	15-40	10-35	5-30	20-30	NP-10
	49-60	extremely gravelly loamy coarse sand, extremely gravelly coarse sandy loam	GP, GP-GM	A-1	0-10	0-5	25-35	15-25	5-15	0-10	15-25	NP-5
0422: Palinor-----	0-8	very gravelly loam	GM	A-1, A-2	0	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34	indurated			---	---	---	---	---	---	---	---
	34-60	stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	0	0-30	30-50	20-45	15-35	10-30	---	NP
Zimbob-----	0-2	very gravelly loam	GM	A-1, A-2	0	0-10	50-65	30-50	25-40	20-35	20-25	NP-5
	2-11	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0-15	40-60	30-50	25-40	20-35	20-25	NP-5
	11-15	unweathered bedrock			---	---	---	---	---	---	---	---
Okan-----	0-8	sandy loam	SM	A-2	0	0	90-95	85-95	50-60	25-35	15-25	NP-5
	8-38	sandy loam	SM	A-2	0	0-10	90-95	85-95	50-60	25-35	15-25	NP-5
	38-60	stratified extremely gravelly loamy sand	GM, GP-GM	A-1	0	0-15	30-45	25-40	10-30	5-15	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0424: Palinor-----	0-8	very gravelly loam	GM	A-1, A-2	0	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34	indurated			---	---	---	---	---	---	---	---
	34-60	stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	0	0-30	30-50	20-45	15-35	10-30	---	NP
Hundraw-----	0-5	gravelly fine sandy loam	GC-GM, GM, SM, SC-SM	A-1, A-4, A-2	0	0	60-80	55-75	40-60	20-40	20-30	NP-10
	5-10	fine sandy loam, loam	CL-ML, ML, SM, SC-SM	A-2, A-4	0	0	80-95	75-90	55-80	30-70	20-30	NP-10
	10-14	weathered bedrock			---	---	---	---	---	---	---	---
Okan-----	0-8	sandy loam	SM	A-2	0	0	90-95	85-95	50-60	25-35	15-25	NP-5
	8-38	sandy loam	SM	A-2	0	0-10	90-95	85-95	50-60	25-35	15-25	NP-5
	38-60	stratified extremely gravelly loamy sand	GM, GP-GM	A-1	0	0-15	30-45	25-40	10-30	5-15	---	NP
0426: Palinor-----	0-8	very gravelly loam	GM	A-1, A-2	0	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34	indurated			---	---	---	---	---	---	---	---
	34-60	stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	0	0-30	30-50	20-45	15-35	10-30	---	NP
Automal-----	0-8	gravelly silt loam	CL-ML, GC-GM, ML, GM	A-4	0-5	0-5	60-85	50-75	45-70	35-65	25-35	5-10
	8-49	very gravelly sandy loam, extremely gravelly sandy loam, very gravelly silt loam	GC-GM, GP-GM, GM	A-1, A-2	0-15	15-30	25-50	15-40	10-35	5-30	20-30	NP-10
	49-60	extremely gravelly loamy coarse sand, extremely gravelly coarse sandy loam	GP, GP-GM	A-1	0-10	0-5	25-35	15-25	5-15	0-10	15-25	NP-5

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Wintermute-----	0-3	gravelly silt loam	GM, ML	A-4	0	0-10	60-85	50-75	45-65	35-60	15-25	NP-5
	3-15	gravelly silt loam, gravelly fine sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-65	30-50	15-25	NP-5
	15-53	stratified extremely cobble loamy sand to very gravelly sandy loam	GM, GP-GM	A-1	0-15	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
	53-60	gravelly silty clay loam	CL, GC	A-6	0-10	0-10	60-85	50-75	45-70	45-65	30-40	10-15
0429: Palinor-----	0-8	very gravelly loam	GM	A-1, A-2	0	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34	indurated			---	---	---	---	---	---	---	---
	34-60	stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	0	0-30	30-50	20-45	15-35	10-30	---	NP
Automal-----	0-8	gravelly silt loam	CL-ML, ML, GC-GM, GM	A-4	0-5	0-5	60-85	50-75	45-70	35-65	25-35	5-10
	8-49	very gravelly sandy loam, extremely gravelly sandy loam, very gravelly silt loam	GC-GM, GM, GP-GM	A-1, A-2	0-15	15-30	25-50	15-40	10-35	5-30	20-30	NP-10
	49-60	extremely gravelly loamy coarse sand, extremely gravelly coarse sandy loam	GP, GP-GM	A-1	0-10	0-5	25-35	15-25	5-15	0-10	15-25	NP-5
Palinor-----	0-3	very gravelly loam	GM	A-1, A-2	0	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	3-14	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	14-34 34-60	indurated stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	---	---	---	---	---	---	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	#	10	40	200		
	In				Pct	Pct					Pct	
0430: Graley-----	0-7	very cobbly loam	GM, SC-SM, GC-GM, SM	A-4	0	30-55	65-80	65-70	55-65	35-50	20-30	NP-10
	7-19	very gravelly clay loam, very gravelly clay	GC	A-2, A-7	0-25	0-25	40-55	35-50	30-50	25-40	45-55	20-30
	19-23	unweathered bedrock			---	---	---	---	---	---	---	---
Pioche-----	0-2	very gravelly sandy loam	GM	A-1	0	0-10	40-55	35-50	20-35	15-25	15-25	NP-5
	2-12	very cobbly clay, very cobbly clay loam	CH, GC, CL	A-7	5-10	20-40	60-70	55-65	45-60	35-55	40-55	20-30
	12-16	unweathered bedrock			---	---	---	---	---	---	---	---
Cropper-----	0-7	very cobbly loam	GC-GM, GM	A-2, A-4	0-5	20-40	55-65	45-60	35-45	30-40	25-35	5-10
	7-14	extremely gravelly sandy clay loam, extremely gravelly clay loam	GC	A-2	0-5	10-30	30-40	20-35	15-25	10-20	35-45	15-20
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
0431: Graley-----	0-7	stony loam	ML, CL-ML, SC-SM, SM	A-4	1-5	5-15	70-95	60-90	50-85	35-65	20-30	NP-10
	7-19	very gravelly clay loam, very gravelly clay	GC	A-2, A-7	0-25	0-25	40-55	35-50	30-50	25-40	45-55	20-30
	19-23	unweathered bedrock			---	---	---	---	---	---	---	---
Chen-----	0-3	very gravelly loam	GC	A-2	0	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	3-16	very gravelly clay, extremely gravelly clay, very cobbly clay	GC	A-2, A-7	0-5	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	16-20	unweathered bedrock			---	---	---	---	---	---	---	---
McIvey-----	0-12	very cobbly loam	GC	A-6	0	25-50	50-70	45-65	40-60	35-50	30-40	10-15
	12-18	very gravelly clay loam, gravelly clay loam	CL, GC, SC	A-7	0	0-10	55-85	45-75	40-70	35-60	40-45	20-25
	18-60	very gravelly clay, very cobbly clay, extremely cobbly clay	GC	A-2, A-7	0-25	10-55	45-60	35-50	35-45	30-45	45-55	30-35

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	#	10	40	200		
	In				Pct	Pct					Pct	
0470: Rozara-----	0-2	very gravelly loamy coarse sand	GM, SM	A-1	0	0	45-65	25-45	15-30	10-20	---	NP
	2-11	very gravelly loam, very gravelly sandy loam	GC-GM	A-2	0	0	45-60	25-40	20-30	15-30	25-30	5-10
	11-15	unweathered bedrock			---	---	---	---	---	---	---	---
Cucamungo-----	0-3	very gravelly sandy loam	SM	A-1	0	5-15	70-85	30-50	20-35	10-20	20-25	NP-5
	3-14	very gravelly sandy clay loam, very gravelly loam, very gravelly clay loam	SC	A-2, A-6	0	5-15	70-85	30-50	25-45	20-40	30-40	10-20
	14-19	weathered bedrock			---	---	---	---	---	---	---	---
Rock Outcrop----	---	---	---	---	---	---	---	---	---	---	---	---
0471: Cucamungo-----	0-3	very gravelly sandy loam	SM	A-1	0	5-15	70-85	30-50	20-35	10-20	20-25	NP-5
	3-14	very gravelly sandy clay loam, very gravelly loam, very gravelly clay loam	SC	A-2, A-6	0	5-15	70-85	30-50	25-45	20-40	30-40	10-20
	14-19	weathered bedrock			---	---	---	---	---	---	---	---
Hendap-----	0-7	very stony coarse sandy loam	SM, SP-SM	A-1	5-15	0-25	60-90	20-50	10-30	5-25	---	NP
	7-13	extremely gravelly loamy coarse sand, extremely gravelly coarse sandy loam	SM, SP-SM	A-1	0-10	10-30	55-90	15-40	5-25	5-20	---	NP
	13-17	unweathered bedrock			---	---	---	---	---	---	---	---
Rock Outcrop----	---	---	---	---	---	---	---	---	---	---	---	---
0480: Shabliss-----	0-2	gravelly fine sandy loam	SM	A-2, A-4	0	0	68-85	55-75	50-65	25-45	20-25	NP-5
	2-15	loam, very fine sandy loam	ML	A-4	0	0	95-100	90-100	85-95	50-65	15-20	NP-5
	15-31	cemented			---	---	---	---	---	---	---	---
	31-60	very gravelly loamy sand	GM	A-1	0	0-15	35-55	30-50	15-30	10-20	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Palinor-----	0-8	very gravelly loam	GM	A-1, A-2	0	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34	indurated stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	---	---	---	---	---	---	---	---
	34-60				0	0-30	30-50	20-45	15-35	10-30	---	NP
0485: Shabliss-----	0-2	gravelly fine sandy loam	SM	A-2, A-4	0	0	68-85	55-75	50-65	25-45	20-25	NP-5
	2-15	loam, very fine sandy loam	ML	A-4	0	0	95-100	90-100	85-95	50-65	15-20	NP-5
	15-31	cemented very gravelly loamy sand	GM	A-1	---	---	---	---	---	---	---	---
	31-60				0	0-15	35-55	30-50	15-30	10-20	---	NP
Parisa-----	0-5	gravelly loam	GM, SM	A-2, A-4	0	0-10	60-85	50-75	40-65	30-50	20-30	NP-5
	5-36	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0-10	35-60	25-50	20-40	15-35	20-30	NP-5
	36-55	indurated extremely gravelly coarse sandy loam	GP, GP-GM	A-1	---	---	---	---	---	---	---	---
	55-60				0	0-15	15-35	10-25	5-15	0-10	---	NP
Hunnton-----	0-8	silt loam	ML	A-4	0	0	95-100	85-100	75-100	60-75	20-35	NP-10
	8-12	loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-95	60-90	30-35	10-15
	12-21	clay, gravelly clay	CH	A-7	0	0-5	75-100	60-95	60-95	55-85	50-60	25-35
	21-40	indurated			---	---	---	---	---	---	---	---
0490: Wintermute-----	0-3	gravelly silt loam	GM, ML	A-4	0	0-10	60-85	50-75	45-65	35-60	15-25	NP-5
	3-15	gravelly silt loam, gravelly fine sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-65	30-50	15-25	NP-5
	15-53	stratified extremely cobbly loamy sand to very gravelly sandy loam	GM, GP-GM	A-1	0-15	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
	53-60	gravelly silty clay loam	CL, GC	A-6	0-10	0-10	60-85	50-75	45-70	45-65	30-40	10-15

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Automal-----	0-8	gravelly silt loam	CL-ML, GC-GM, ML, GM	A-4	0-5	0-5	60-85	50-75	45-70	35-65	25-35	5-10
	8-49	very gravelly sandy loam, extremely gravelly sandy loam, very gravelly silt loam	GM, GC-GM, GP-GM	A-1, A-2	0-15	15-30	25-50	15-40	10-35	5-30	20-30	NP-10
	49-60	extremely gravelly loamy coarse sand, extremely gravelly coarse sandy loam	GP, GP-GM	A-1	0-10	0-5	25-35	15-25	5-15	0-10	15-25	NP-5
0492: Wintermute-----	0-3	gravelly silt loam	GM, ML	A-4	0	0-10	60-85	50-75	45-65	35-60	15-25	NP-5
	3-15	gravelly silt loam, gravelly fine sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-65	30-50	15-25	NP-5
	15-53	stratified extremely cobbly loamy sand to very gravelly sandy loam	GM, GP-GM	A-1	0-15	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
	53-60	gravelly silty clay loam	CL, GC	A-6	0-10	0-10	60-85	50-75	45-70	45-65	30-40	10-15
Peeko-----	0-4	gravelly loam	GC-GM, GC, GM, SC-SM	A-4, A-6	0	0-5	60-80	50-75	45-65	35-50	20-35	NP-15
	4-10	very gravelly silt loam, very cobbly silt loam, gravelly silt loam	CL-ML, CL, GC, GC-GM	A-4, A-6	0	0-45	50-80	45-75	40-75	35-60	25-35	5-15
	10-30	indurated			---	---	---	---	---	---	---	---
Hundraw-----	0-5	gravelly fine sandy loam	GM, GC-GM, SC-SM, SM	A-1, A-4, A-2	0	0	60-80	55-75	40-60	20-40	20-30	NP-10
	5-10	fine sandy loam, loam	ML, CL-ML, SC-SM, SM	A-2, A-4	0	0	80-95	75-90	55-80	30-70	20-30	NP-10
	10-14	weathered bedrock			---	---	---	---	---	---	---	---
0494: Wintermute-----	0-3	gravelly silt loam	GM, ML	A-4	0	0-10	60-85	50-75	45-65	35-60	15-25	NP-5
	3-15	gravelly silt loam, gravelly fine sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-65	30-50	15-25	NP-5
	15-53	stratified extremely cobbly loamy sand to very gravelly sandy loam	GM, GP-GM	A-1	0-15	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
	53-60	gravelly silty clay loam	CL, GC	A-6	0-10	0-10	60-85	50-75	45-70	45-65	30-40	10-15

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

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TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Palinor-----	0-8	gravelly loam	GM, SM	A-4	0	0-10	60-90	50-85	45-65	35-50	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34 34-60	indurated stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	---	---	---	---	---	---	---	---
0501: Pharo-----	0-13	gravelly loam	GC-GM, SC-SM	A-4	0	0	55-80	50-75	40-60	35-50	25-30	5-10
	13-36	very gravelly loam, extremely gravelly sandy loam	GC-GM	A-2	0	0-5	25-40	20-35	15-30	10-20	20-30	5-10
	36-60	extremely gravelly coarse sand	GP, GP-GM	A-1	0	0-10	25-30	20-25	10-15	0-10	0-14	NP
Izar-----	0-3	very gravelly loam	GC	A-2	0	0-25	30-55	25-50	20-45	15-35	25-35	10-15
	3-12	very gravelly loam, extremely gravelly loam	GC	A-2	0	0-25	20-55	15-50	15-45	10-35	25-35	10-15
	12-16	unweathered bedrock			---	---	---	---	---	---	---	---
Okan-----	0-8	sandy loam	SM	A-2	0	0	90-95	85-95	50-60	25-35	15-25	NP-5
	8-38	sandy loam	SM	A-2	0	0-10	90-95	85-95	50-60	25-35	15-25	NP-5
	38-60	stratified extremely gravelly loamy sand	GM, GP-GM	A-1	0	0-15	30-45	25-40	10-30	5-15	---	NP
0503: Automal-----	0-8	gravelly silt loam	CL-ML, ML, GC-GM, GM	A-4	0-5	0-5	60-85	50-75	45-70	35-65	25-35	5-10
	8-49	very gravelly sandy loam, extremely gravelly sandy loam, very gravelly silt loam	GC-GM, GM, GP-GM	A-1, A-2	0-15	15-30	25-50	15-40	10-35	5-30	20-30	NP-10
	49-60	extremely gravelly loamy coarse sand, extremely gravelly coarse sandy loam	GP, GP-GM	A-1	0-10	0-5	25-35	15-25	5-15	0-10	15-25	NP-5
Okan-----	0-8	sandy loam	SM	A-2	0	0	90-95	85-95	50-60	25-35	15-25	NP-5
	8-38	sandy loam	SM	A-2	0	0-10	90-95	85-95	50-60	25-35	15-25	NP-5
	38-60	stratified extremely gravelly loamy sand	GM, GP-GM	A-1	0	0-15	30-45	25-40	10-30	5-15	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

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TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

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TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

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TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0532: Onkeyo-----	0-8	very gravelly silt loam	GC	A-2, A-6	0	0-15	40-65	30-55	25-50	20-45	25-35	10-15
	8-17	extremely cobbly silty clay loam, very cobbly silty clay loam	GM, SM	A-2, A-6, A-7	0-10	35-60	55-75	20-50	20-50	15-45	35-45	10-15
	17-21	unweathered bedrock			---	---	---	---	---	---	---	---
Pockaloo-----	0-2	very gravelly loam	GM	A-2	0	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	2-14	very gravelly loam, very gravelly silt loam	GM	A-2, A-4	0	0	50-60	35-50	35-45	25-40	20-25	NP-5
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
Tecomar-----	0-2	extremely gravelly loam	GC	A-2	0	5-30	20-35	15-30	10-25	10-20	25-35	10-15
	2-14	extremely cobbly silt loam, very cobbly silt loam	GC	A-2, A-6	0-15	45-60	35-55	20-45	15-40	10-40	25-35	10-15
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
0540: Kunzler-----	0-16	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
	16-48	fine sandy loam, sandy loam	SC-SM, SM	A-2, A-4	0	0	90-100	85-100	45-80	25-50	20-30	NP-10
	48-60	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
Sycomat-----	0-5	sandy loam	ML, SM	A-4	0	0	85-100	75-100	60-75	45-60	15-30	NP-5
	5-11	gravelly sandy loam, gravelly silt loam, loam	GM, SM, ML	A-2, A-4	0	0	55-100	50-100	45-75	30-60	15-30	NP-5
	11-48	gravelly coarse sandy loam, sandy loam, gravelly loam	GM, ML, SM	A-1, A-2, A-4	0	0	55-100	50-100	35-75	20-55	15-30	NP-5
	48-60	very gravelly sand, very gravelly loamy sand	GP, GP-GM	A-1	0	0-5	30-55	25-50	20-35	0-10	---	NP
0541: Kunzler-----	0-16	silt loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
	16-48	fine sandy loam, sandy loam	SC-SM, SM	A-2, A-4	0	0	90-100	85-100	45-80	25-50	20-30	NP-10
	48-60	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
Sheffit-----	0-4	silt loam	CL-ML, ML	A-4	0	0	100	95-100	80-100	65-85	25-35	5-10
	4-60	stratified silt loam to clay	CL, MH, ML	A-7	0	0	100	95-100	90-100	85-95	40-60	15-25

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth In	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct						
0550: Urmafot-----	0-7	gravelly loam	GM, ML	A-2, A-4	0	0	60-80	50-75	40-65	30-60	25-35	NP-5
	7-16	gravelly loam	GM, ML	A-2, A-4	0	0	60-80	50-75	40-65	30-60	25-35	NP-5
	16-29	indurated			---	---	---	---	---	---	---	---
	29-60	stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam	GM, GP-GM, GP	A-1	0-10	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
Bobs-----	0-8	gravelly loam	GM, SM, ML	A-4	0	0-15	70-80	65-75	55-70	40-55	20-25	NP-5
	8-13	gravelly loam, gravelly very fine sandy loam, gravelly silt loam	GM, SM	A-4	0	0-15	60-80	50-75	45-70	35-50	20-25	NP-5
	13-17	indurated			---	---	---	---	---	---	---	---
Urmafot-----	0-5	gravelly loam	GM, ML	A-2, A-4	0	0	60-80	50-75	40-65	30-60	25-35	NP-5
	5-9	gravelly loam	GM, ML	A-2, A-4	0	0	60-80	50-75	40-65	30-60	25-35	NP-5
	9-29	indurated			---	---	---	---	---	---	---	---
	29-60	stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam	GP, GM, GP-GM	A-1	0-10	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
0551: Urmafot-----	0-7	gravelly loam	GM, ML	A-2, A-4	0	0	60-80	50-75	40-65	30-60	25-35	NP-5
	7-16	gravelly loam	GM, ML	A-2, A-4	0	0	60-80	50-75	40-65	30-60	25-35	NP-5
	16-29	indurated			---	---	---	---	---	---	---	---
	29-60	stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam	GM, GP, GP-GM	A-1	0-10	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
Bobs-----	0-8	gravelly loam	ML, GM, SM	A-4	0	0-15	70-80	65-75	55-70	40-55	20-25	NP-5
	8-13	gravelly loam, gravelly very fine sandy loam, gravelly silt loam	GM, SM	A-4	0	0-15	60-80	50-75	45-70	35-50	20-25	NP-5
	13-17	indurated			---	---	---	---	---	---	---	---
552: Urmafot-----	0-7	very gravelly loam	GM	A-1, A-2	0	0	30-60	25-50	20-45	15-35	25-35	NP-5
	7-16	gravelly loam	GM, ML	A-2, A-4	0	0	60-80	50-75	40-65	30-60	25-35	NP-5
	16-29	indurated			---	---	---	---	---	---	---	---
	29-60	stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam	GP, GM, GP-GM	A-1	0-10	10-40	15-40	5-30	0-25	0-20	15-25	NP-5

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
Pharo-----	In				Pct	Pct					Pct	
	0-13	gravelly loam	GC-GM, SC-SM	A-4	0	0	55-80	50-75	40-60	35-50	25-30	5-10
	13-36	very gravelly loam, extremely gravelly sandy loam	GC-GM	A-2	0	0-5	25-40	20-35	15-30	10-20	20-30	5-10
	36-60	extremely gravelly coarse sand	GP, GP-GM	A-1	0	0-10	25-30	20-25	10-15	0-10	0-14	NP
0554: Urmafot-----	0-7	very gravelly loam	GM	A-1, A-2	0	0	30-60	25-50	20-45	15-35	25-35	NP-5
	7-16	gravelly loam	GM, ML	A-2, A-4	0	0	60-80	50-75	40-65	30-60	25-35	NP-5
	16-29	indurated			---	---	---	---	---	---	---	---
	29-60	stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam	GP, GM, GP-GM	A-1	0-10	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
Tecomar-----	0-2	extremely gravelly loam	GC	A-2	0	5-30	20-35	15-30	10-25	10-20	25-35	10-15
	2-14	extremely cobbly silt loam, very cobbly silt loam	GC	A-2, A-6	0-15	45-60	35-55	20-45	15-40	10-40	25-35	10-15
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
Urmafot-----	0-7	very gravelly loam	GM	A-1, A-2	0	0	30-60	25-50	20-45	15-35	25-35	NP-5
	7-9	gravelly loam	GM, ML	A-2, A-4	0	0	60-80	50-75	40-65	30-60	25-35	NP-5
	9-29	indurated			---	---	---	---	---	---	---	---
	29-60	stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam	GM, GP-GM, GP	A-1	0-10	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
0561: Palinor-----	0-8	very gravelly loam	GM	A-1, A-2	0	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34	indurated			---	---	---	---	---	---	---	---
	34-60	stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	0	0-30	30-50	20-45	15-35	10-30	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Urmafot-----	0-7	very gravelly loam	GM	A-1, A-2	0	0	30-60	25-50	20-45	15-35	25-35	NP-5
	7-16	gravelly loam	GM, ML	A-2, A-4	0	0	60-80	50-75	40-65	30-60	25-35	NP-5
	16-29	indurated			---	---	---	---	---	---	---	---
	29-60	stratified extremely gravelly coarse sandy loam to extremely gravelly sandy loam	GP, GM, GP-GM	A-1	0-10	10-40	15-40	5-30	0-25	0-20	15-25	NP-5
Palinor-----	0-8	very gravelly loam	GM	A-1, A-2	0	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34	indurated			---	---	---	---	---	---	---	---
	34-60	stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	0	0-30	30-50	20-45	15-35	10-30	---	NP
0562: Bobs-----	0-8	very gravelly loam	GM	A-1, A-2	0	0-15	40-55	35-50	30-45	20-35	20-25	NP-5
	8-13	gravelly loam, gravelly very fine sandy loam, gravelly silt loam	GM, SM	A-4	0	0-15	60-80	50-75	45-70	35-50	20-25	NP-5
	13-17	indurated			---	---	---	---	---	---	---	---
0563: Bobs-----	0-8	cobbly loam	GM, SM, ML	A-4	0	15-30	70-80	65-75	55-70	40-55	20-25	NP-5
	8-13	gravelly loam, gravelly very fine sandy loam, gravelly silt loam	GM, SM	A-4	0	0-15	60-80	50-75	45-70	35-50	20-25	NP-5
	13-17	indurated			---	---	---	---	---	---	---	---
Pyrat-----	0-6	very stony sandy loam	GM	A-1, A-2	5-25	0-10	40-55	35-50	25-45	15-30	15-25	NP-5
	6-14	very gravelly sandy loam	GM	A-1	0	0	40-60	25-50	20-40	10-25	15-25	NP-5
	14-21	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	25-50	20-45	15-35	15-25	NP-5
	21-42	very gravelly sandy loam	GM	A-1	0	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	42-60	stratified extremely gravelly loamy sand to very gravelly coarse sandy loam	GP, GM, GP-GM	A-1	0	0-15	15-50	10-45	5-35	0-15	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0575: Pookaloo-----	0-2	very gravelly loam	GM	A-2	0	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	2-14	very gravelly loam, very gravelly silt loam	GM	A-2, A-4	0	0	50-60	35-50	35-45	25-40	20-25	NP-5
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
Cavehill-----	0-12	very gravelly silt loam	GC-GM, GM	A-2	0	0-15	40-55	35-50	30-45	25-35	25-35	5-10
	12-30	very gravelly loam, very cobbly loam	GC-GM, GM	A-2, A-4	0-5	10-45	35-70	30-65	25-50	20-40	25-35	5-10
	30-34	unweathered bedrock			---	---	---	---	---	---	---	---
Rock Outcrop----	---	---	---	---	---	---	---	---	---	---	---	---
0576: Pookaloo-----	0-2	very gravelly loam	GM	A-2	0	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	2-14	very gravelly loam, very gravelly silt loam	GM	A-2, A-4	0	0	50-60	35-50	35-45	25-40	20-25	NP-5
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
Tecomar-----	0-2	extremely gravelly loam	GC	A-2	0	5-30	20-35	15-30	10-25	10-20	25-35	10-15
	2-14	extremely cobbly silt loam, very cobbly silt loam	GC	A-2, A-6	0-15	45-60	35-55	20-45	15-40	10-40	25-35	10-15
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
Onkeyo-----	0-8	very gravelly silt loam	GC	A-2, A-6	0	0-15	40-65	30-55	25-50	20-45	25-35	10-15
	8-17	extremely cobbly silty clay loam, very cobbly silty clay loam	GM, SM	A-6, A-2, A-7	0-10	35-60	55-75	20-50	20-50	15-45	35-45	10-15
	17-21	unweathered bedrock			---	---	---	---	---	---	---	---
0582: Sheffit-----	0-10	fine sandy loam	ML	A-4	0	0	100	95-100	80-90	50-70	20-25	NP-5
	10-60	stratified silt loam to clay	CL, ML, MH	A-7	0	0	100	95-100	90-100	85-95	40-60	15-25
Sheffit-----	0-4	sandy loam	SM	A-4	0	0	100	90-100	70-80	40-50	20-25	NP-5
	4-60	stratified silt loam to clay	CL, MH, ML	A-7	0	0	100	95-100	90-100	85-95	40-60	15-25
Katelana-----	0-5	silt loam	CL-ML	A-4	0	0	100	100	65-85	60-80	20-30	5-10
	5-28	silt loam	CL	A-6	0	0	100	100	70-90	65-85	25-35	10-15
	28-32	stratified silt loam to silty clay loam	CL	A-6	0	0	100	100	95-100	75-85	25-40	10-20
	32-62	stratified clay loam to silty clay loam	CL	A-7	0	0	100	100	95-100	85-95	40-50	15-25

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct						
0590: Upatad-----	In										Pct	
	0-1	very gravelly silt loam	GC-GM, GM	A-2, A-4	0	0	35-60	25-50	20-45	15-40	25-35	5-10
	1-14	very gravelly silty clay loam, very gravelly clay loam, very cobbly silty clay loam	GC	A-2, A-6	0	15-55	40-70	30-65	25-60	20-50	35-40	15-20
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
Segura-----	0-2	very cobbly loam	GC-GM, SC-SM	A-4	0-5	30-45	65-80	55-70	45-60	35-50	25-30	5-10
	2-11	gravelly clay loam, gravelly loam, sandy clay loam	SC	A-2, A-7, A-6	0-5	0-15	65-90	50-85	40-60	30-50	30-45	10-25
	11-15	unweathered bedrock			---	---	---	---	---	---	---	---
0600: Onkeyo-----	0-8	very gravelly silt loam	GC	A-2, A-6	0	0-15	40-65	30-55	25-50	20-45	25-35	10-15
	8-17	extremely cobbly silty clay loam, very cobbly silty clay loam	GM, SM	A-6, A-2, A-7	0-10	35-60	55-75	20-50	20-50	15-45	35-45	10-15
	17-21	unweathered bedrock			---	---	---	---	---	---	---	---
Amene-----	0-12	very gravelly silt loam	GC	A-2, A-6	0	0	40-55	35-50	30-45	25-45	30-35	10-15
	12-18	very gravelly silt loam, very gravelly loam	GC	A-2, A-6	0	0-25	35-60	30-45	25-45	20-40	30-35	10-15
	18-22	unweathered bedrock			---	---	---	---	---	---	---	---
Pookaloo-----	0-2	very gravelly loam	GM	A-2	0	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	2-14	very gravelly loam, very gravelly silt loam	GM	A-2, A-4	0	0	50-60	35-50	35-45	25-40	20-25	NP-5
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
0610: Wintermute-----	0-3	gravelly silt loam	GM, ML	A-4	0	0-10	60-85	50-75	45-65	35-60	15-25	NP-5
	3-15	gravelly silt loam, gravelly fine sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-65	30-50	15-25	NP-5
	15-53	stratified extremely cobbly loamy sand to very gravelly sandy loam	GM, GP-GM	A-1	0-15	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
	53-60	gravelly silty clay loam	CL, GC	A-6	0-10	0-10	60-85	50-75	45-70	45-65	30-40	10-15

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Eastwell-----	0-5	gravelly sandy loam	SM	A-2, A-1, A-4	0	0-5	65-80	60-75	40-60	20-40	20-25	NP-5
	5-18	very gravelly loam, very gravelly sandy loam	GC-GM, GC, GM	A-1, A-2	0	0-10	40-60	35-50	20-40	10-30	20-35	NP-15
	18-27 27-60	cemented very gravelly loam, very cobbly loam	GC-GM, GM	A-2, A-4	---	---	---	---	---	---	---	---
0614: Wintermute-----	0-3	gravelly sandy loam	GM, ML, SM	A-2, A-4	0	0-10	60-85	50-75	40-65	30-55	20-25	NP-5
	3-15	gravelly silt loam, gravelly fine sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-65	30-50	15-25	NP-5
	15-53	stratified extremely cobbly loamy sand to very gravelly sandy loam	GM, GP-GM	A-1	0-15	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
	53-60	gravelly silty clay loam	CL, GC	A-6	0-10	0-10	60-85	50-75	45-70	45-65	30-40	10-15
Eastwell-----	0-5	gravelly sandy loam	SM	A-2, A-1, A-4	0	0-5	65-80	60-75	40-60	20-40	20-25	NP-5
	5-18	very gravelly loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-2	0	0-10	40-60	35-50	20-40	10-30	20-35	NP-15
	18-27 27-60	cemented very gravelly loam, very cobbly loam	GC-GM, GM	A-2, A-4	---	---	---	---	---	---	---	---
Zerk-----	0-2 2-16	gravelly loam gravelly loam, very gravelly loam	SM GM, SM	A-4 A-1, A-2, A-4	0 0	0 0-10	70-85 50-85	60-75 40-75	45-60 30-60	35-50 20-50	20-25 20-25	NP-5 NP-5
	16-60	stratified extremely gravelly coarse sand to extremely gravelly loamy sand	GP, GP-GM	A-1	0	15-30	25-40	15-30	5-15	0-10	---	NP
0617: Wintermute-----	0-3	gravelly silt loam	GM, ML	A-4	0	0-10	60-85	50-75	45-65	35-60	15-25	NP-5
	3-15	gravelly silt loam, gravelly fine sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-65	30-50	15-25	NP-5
	15-53	stratified extremely cobbly loamy sand to very gravelly sandy loam	GM, GP-GM	A-1	0-15	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
	53-60	gravelly silty clay loam	CL, GC	A-6	0-10	0-10	60-85	50-75	45-70	45-65	30-40	10-15

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct						
Zerk-----	In											
	0-2	gravelly loam	SM	A-4	0	0	70-85	60-75	45-60	35-50	20-25	NP-5
	2-16	gravelly loam, very gravelly loam	GM, SM	A-2, A-1, A-4	0	0-10	50-85	40-75	30-60	20-50	20-25	NP-5
	16-60	stratified extremely gravelly coarse sand to extremely gravelly loamy sand	GP, GP-GM	A-1	0	15-30	25-40	15-30	5-15	0-10	---	NP
Loray-----	0-12	gravelly loam	GM, SC-SM, GC-GM, SM	A-2, A-4	0	0	55-80	50-75	40-70	30-50	20-30	NP-10
	12-60	stratified extremely gravelly coarse sand to extremely gravelly loamy fine sand	GP, GP-GM	A-1	0	0-15	20-35	10-25	5-20	0-10	---	NP
0620: Atlow-----	0-5	very gravelly loam	GC, SC	A-2, A-6	0	0-15	35-85	30-50	20-45	15-40	25-35	10-15
	5-18	very gravelly clay loam, very cobbly clay loam, very gravelly sandy clay loam	GC	A-6, A-2, A-7	0	0-45	35-60	25-50	20-50	15-40	35-45	15-20
	18-22	unweathered bedrock			---	---	---	---	---	---	---	---
Atlow-----	0-5	very gravelly loam	GC, SC	A-2, A-6	0	0-15	35-85	30-50	20-45	15-40	25-35	10-15
	5-18	very gravelly clay loam, very cobbly clay loam, very gravelly sandy clay loam	GC	A-2, A-7, A-6	0	0-45	35-60	25-50	20-50	15-40	35-45	15-20
	18-22	unweathered bedrock			---	---	---	---	---	---	---	---
0631: Eastwell-----	0-5	gravelly sandy loam	SM	A-1, A-2, A-4	0	0-5	65-80	60-75	40-60	20-40	20-25	NP-5
	5-18	very gravelly loam, very gravelly sandy loam	GC, GM, GC-GM	A-1, A-2	0	0-10	40-60	35-50	20-40	10-30	20-35	NP-15
	18-27	cemented			---	---	---	---	---	---	---	---
	27-60	very gravelly loam, very cobbly loam	GC-GM, GM	A-2, A-4	0-5	15-45	50-70	45-60	35-55	30-50	20-30	NP-10
Wintermute-----	0-3	gravelly silt loam	GM, ML	A-4	0	0-10	60-85	50-75	45-65	35-60	15-25	NP-5
	3-15	gravelly silt loam, gravelly fine sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-65	30-50	15-55	NP-5
	15-53	stratified extremely cobbly loamy sand to very gravelly sandy loam	GM, GP-GM	A-1	0-15	15-45	25-55	15-45	10-35	5-55	15-25	NP-5
	53-60	gravelly silty clay loam	CL, GC	A-6	0-10	0-10	60-85	50-75	45-70	45-65	30-40	10-15

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0636: Eastwell-----	0-5	very gravelly loam	GM	A-1, A-2	0	0-5	35-55	30-50	25-40	20-35	20-25	NP-5
	5-18	very gravelly loam, very gravelly sandy loam	GC, GM, GC-GM	A-1, A-2	0	0-10	40-60	35-50	20-40	10-30	20-35	NP-15
	18-27 27-60	cemented very gravelly loam, very cobbly loam	GC-GM, GM	A-2, A-4	0-5	15-45	50-70	45-60	35-55	30-50	20-30	NP-10
Hundraw-----	0-5	gravelly fine sandy loam	GM, GC-GM, SC-SM, SM	A-1, A-2, A-4	0	0	60-80	55-75	40-60	20-40	20-30	NP-10
	5-10	fine sandy loam, loam	ML, CL-ML, SC-SM, SM	A-2, A-4	0	0	80-95	75-90	55-80	30-70	20-30	NP-10
	10-14	weathered bedrock			---	---	---	---	---	---	---	---
Okan-----	0-8	sandy loam	SM	A-2	0	0	90-95	85-95	50-60	25-35	15-25	NP-5
	8-38	sandy loam	SM	A-2	0	0-10	90-95	85-95	50-60	25-35	15-25	NP-5
	38-60	stratified extremely gravelly loamy sand	GM, GP-GM	A-1	0	0-15	30-45	25-40	10-30	5-15	---	NP
0650: Mizpah-----	0-9	sandy loam	SC-SM, SM	A-4	0	0	80-95	75-90	60-75	40-50	20-30	NP-10
	9-32	silty clay	CH, CL	A-7	0	0	90-100	85-100	75-90	65-75	45-55	20-30
	32-40	weathered bedrock			---	---	---	---	---	---	---	---
Zerk-----	0-2	gravelly sandy loam	GM, SM	A-1, A-4, A-2	0	0	55-80	50-75	40-60	20-40	20-25	NP-5
	2-16	gravelly loam, very gravelly loam	GM, SM	A-1, A-4, A-2	0	0-10	50-85	40-75	30-60	20-50	20-25	NP-5
	16-60	stratified extremely gravelly coarse sand to extremely gravelly loamy sand	GP, GP-GM	A-1	0	15-30	25-40	15-30	5-15	0-10	---	NP
Wintermute-----	0-3	gravelly silt loam	GM, ML	A-4	0	0-10	60-85	50-75	45-65	35-60	15-25	NP-5
	3-15	gravelly silt loam, gravelly fine sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-65	30-50	15-25	NP-5
	15-53	stratified extremely cobbly loamy sand to very gravelly sandy loam	GM, GP-GM	A-1	0-15	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
	53-60	gravelly silty clay loam	CL, GC	A-6	0-10	0-10	60-85	50-75	45-70	45-65	30-40	10-15
0671: Idway-----	0-4	sandy loam	SM	A-2, A-4	0	0	85-100	75-100	45-75	25-50	15-25	NP-5
	4-12	sandy loam	SM	A-2, A-4	0	0	90-100	85-100	45-75	25-50	15-25	NP-5
	12-27	loam	ML	A-4	0	0	95-100	90-100	50-80	50-70	15-25	NP-5
	27-60	stratified extremely gravelly coarse sand to fine sand	GM, GP-GM, SP-SM, SM	A-1	0	0	50-80	35-70	15-45	5-25	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0691: Tarnach-----	0-3	very gravelly loam	GC, GC-GM	A-2	0	0-10	30-55	25-50	25-40	20-35	25-35	5-15
	3-12	very gravelly loam	GC, GC-GM	A-2	0	0-10	30-55	25-50	25-40	20-35	25-35	5-15
	12-16	unweathered bedrock			---	---	---	---	---	---	---	---
Tarnach-----	0-3	very gravelly loam	GC, GC-GM	A-2	0	0-10	30-55	25-50	25-40	20-35	25-35	5-15
	3-12	very gravelly loam	GC, GC-GM	A-2	0	0-10	30-55	25-50	25-40	20-35	25-35	5-15
	12-16	unweathered bedrock			---	---	---	---	---	---	---	---
Wesfil-----	0-6	very channery loam	GC-GM	A-2	0	10-25	50-65	35-50	25-45	20-35	20-25	5-10
	6-10	unweathered bedrock			---	---	---	---	---	---	---	---
0692: Tarnach-----	0-3	very gravelly loam	GC, GC-GM	A-2	0	0-10	30-55	25-50	25-40	20-35	25-35	5-15
	3-12	very gravelly loam	GC, GC-GM	A-2	0	0-10	30-55	25-50	25-40	20-35	25-35	5-15
	12-16	unweathered bedrock			---	---	---	---	---	---	---	---
Upatad-----	0-2	very gravelly silt loam	GC-GM, GM	A-2, A-4	0	0	35-60	25-50	20-45	15-40	25-35	5-10
	2-14	very gravelly silty clay loam, very gravelly clay loam, very cobbly silty clay loam	GC	A-2, A-6	0	15-55	40-70	30-65	25-60	20-50	35-40	15-20
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
Wesfil-----	0-6	very channery loam	GC-GM	A-2	0	10-25	50-65	35-50	25-45	20-35	20-25	5-10
	6-10	unweathered bedrock			---	---	---	---	---	---	---	---
0700: Shabliss-----	0-2	gravelly fine sandy loam	SM	A-2, A-4	0	0	68-85	55-75	50-65	25-45	20-25	NP-5
	2-15	loam, very fine sandy loam	ML	A-4	0	0	95-100	90-100	85-95	50-65	15-20	NP-5
	15-31	cemented			---	---	---	---	---	---	---	---
	31-60	very gravelly loamy sand	GM	A-1	0	0-15	35-55	30-50	15-30	10-20	---	NP
Tulase-----	0-2	very fine sandy loam	CL-ML, ML	A-4	0	0	100	100	95-100	60-70	15-25	NP-10
	2-60	very fine sandy loam, silt loam	CL-ML, ML	A-4	0	0	95-100	90-100	85-100	70-85	15-25	NP-10
Lincoyer-----	0-9	silt loam	CL-ML, ML	A-4	0	0	100	100	85-100	70-90	15-25	NP-10
	9-60	very fine sandy loam, silt loam	CL-ML, ML	A-4	0	0	100	100	95-100	80-95	15-25	NP-10

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0720: Mysol-----	0-5	silty clay loam	CL	A-6, A-7	0	0	100	100	85-95	80-90	35-45	15-20
	5-17	silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	75-95	60-75	30-45	10-20
	17-31	silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	75-95	60-75	30-45	10-20
	31-60	stratified very gravelly coarse sand to fine sandy loam	SM	A-4	0	0-10	75-100	70-100	60-70	35-50	---	NP
Mysol-----	0-5	silty clay loam	CL	A-6, A-7	0	0	100	100	85-95	80-90	35-45	15-20
	5-17	silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	75-95	60-75	30-45	10-20
	17-31	silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	75-95	60-75	30-45	10-20
	31-60	stratified very gravelly coarse sand to fine sandy loam	SM	A-4	0	0-10	75-100	70-100	60-70	35-50	---	NP
0730: Idway-----	0-4	loamy sand	SM, SP-SM	A-1, A-2	0	0	85-100	75-100	15-40	5-30	---	NP
	4-12	sandy loam	SM	A-2, A-4	0	0	90-100	85-100	45-75	25-50	15-25	NP-5
	12-27	loam	ML	A-4	0	0	95-100	90-100	50-80	50-70	15-25	NP-5
	27-60	stratified extremely gravelly coarse sand to fine sand	GM, GP-GM, SP-SM, SM	A-1	0	0	50-80	35-70	15-45	5-25	---	NP
Kawich-----	0-2	fine sand	SM	A-2	0	0	100	100	75-90	20-30	---	NP
	2-60	fine sand	SM	A-2	0	0	100	100	75-90	20-30	---	NP
Mysol-----	0-5	silt loam	CL	A-6	0	0	100	100	70-85	60-70	30-35	10-15
	5-17	silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	75-95	60-75	30-45	10-20
	17-31	silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	75-95	60-75	30-45	10-20
	31-60	stratified very gravelly coarse sand to fine sandy loam	SM	A-4	0	0-10	75-100	70-100	60-70	35-50	---	NP
0733: Idway-----	0-4	loamy sand	SM, SP-SM	A-1, A-2	0	0	85-100	75-100	15-40	5-30	---	NP
	4-12	sandy loam	SM	A-2, A-4	0	0	90-100	85-100	45-75	25-50	15-25	NP-5
	12-27	loam	ML	A-4	0	0	95-100	90-100	50-80	50-70	15-25	NP-5
	27-60	stratified extremely gravelly coarse sand to fine sand	GM, GP-GM, SP-SM, SM	A-1	0	0	50-80	35-70	15-45	5-25	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct						
Idway-----	In											
	0-4	sandy loam	SM	A-2, A-4	0	0	85-100	75-100	45-75	25-50	15-25	NP-5
	4-12	sandy loam	SM	A-2, A-4	0	0	90-100	85-100	45-75	25-50	15-25	NP-5
	12-27	loam	ML	A-4	0	0	95-100	90-100	50-80	50-70	15-25	NP-5
	27-60	stratified extremely gravelly coarse sand to fine sand	GP-GM, GM, SM, SP-SM	A-1	0	0	50-80	35-70	15-45	5-25	---	NP
Mysol-----	0-5	silty clay loam	CL	A-6, A-7	0	0	100	100	85-95	80-90	35-45	15-20
	5-17	silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	75-95	60-75	30-45	10-20
	17-31	silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	75-95	60-75	30-45	10-20
	31-60	stratified very gravelly coarse sand to fine sandy loam	SM	A-4	0	0-10	75-100	70-100	60-70	35-50	---	NP
0740: Upatad-----	0-1	extremely cobbley loam	GC, GC-GM	A-2	0	30-50	40-45	35-40	30-35	25-30	25-35	5-15
	1-14	very gravelly clay loam, very cobbley silty clay loam	GC	A-2, A-6	0	15-55	40-70	30-65	25-60	20-45	35-40	15-20
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
Pioche-----	0-2	extremely stony loam	GM, SM	A-2, A-4	20-50	15-55	60-85	50-75	40-60	30-50	15-25	NP-5
	2-12	very cobbley clay, very cobbley clay loam	CH, GC, CL	A-7	5-10	20-40	60-70	55-65	45-60	35-55	40-55	20-30
	12-16	unweathered bedrock			---	---	---	---	---	---	---	---
Tarnach-----	0-3	very gravelly loam	GC, GC-GM	A-2	0	0-10	30-55	25-50	25-40	20-35	25-35	5-15
	3-12	very gravelly loam	GC, GC-GM	A-2	0	0-10	30-55	25-50	25-40	20-35	25-35	5-15
	12-16	unweathered bedrock			---	---	---	---	---	---	---	---
0760: Playas-----	0-6	silty clay loam	CH, CL, ML, MH	A-7	0	0	100	100	100	90-100	40-55	15-25
	6-60	silty clay loam, clay, silty clay	CH, MH, CL	A-7	0	0	100	100	100	90-100	45-75	20-40
0761: Umberland-----	0-5	silty clay	CH, CL	A-7	0	0	100	100	95-100	85-100	45-55	25-30
	5-60	silty clay loam, silty clay	CH, CL	A-7	0	0	100	100	95-100	85-100	40-55	25-30
Umberland-----	0-15	silty clay	CH, ML, CL, MH	A-7	0	0	100	100	95-100	85-95	45-55	20-25
	15-60	silty clay, silty clay loam, clay	CH, CL	A-7	0	0	100	100	95-100	85-95	40-55	20-30

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0762: Umberland-----	0-5	silty clay	CH, CL	A-7	0	0	100	100	95-100	85-100	45-55	25-30
	5-60	silty clay loam, silty clay	CH, CL	A-7	0	0	100	100	95-100	85-100	40-55	25-30
Playas-----	0-6	silty clay loam	CL, CH, MH, ML	A-7	0	0	100	100	100	90-100	40-55	15-25
	6-60	silty clay loam, clay, silty clay	CH, MH, CL	A-7	0	0	100	100	100	90-100	45-75	20-40
0763: Equis-----	0-6	silty clay	MH	A-7	0	0	100	100	95-100	95-100	60-80	20-30
	6-24	silty clay, clay	MH	A-7	0	0	100	100	95-100	95-100	60-80	20-30
	24-41	silty clay loam, silty clay	MH	A-7	0	0	100	100	95-100	95-100	50-70	15-25
	41-60	silty clay loam, silt loam, silty clay	MH, ML	A-6, A-7	0	0	100	95-100	90-100	85-95	35-70	10-25
Umberland-----	0-15	silty clay	CH, CL, ML, MH	A-7	0	0	100	100	95-100	85-95	45-55	20-25
	15-60	silty clay, silty clay loam, clay	CH, CL	A-7	0	0	100	100	95-100	85-95	40-55	20-30
Duffer-----	0-25	silty clay loam	CL	A-6	0	0	100	100	95-100	85-95	35-40	15-20
	25-60	silt loam, silty clay loam	CL	A-6	0	0	100	100	95-100	85-95	30-40	10-20
0764: Umberland-----	0-15	silty clay loam	CL, ML	A-7	0	0	100	100	90-100	85-95	40-50	15-20
	15-60	silty clay, silty clay loam, clay	CH, CL	A-7	0	0	100	100	95-100	85-95	40-55	20-30
Rubylake-----	0-7	clay loam	CL	A-6	0	0	100	100	85-95	80-90	35-40	15-20
	7-23	silt loam	ML	A-4	0	0	100	100	95-100	85-90	30-40	5-10
	23-55	silt loam	ML	A-4	0	0	100	100	95-100	85-90	30-40	5-10
	55-60	silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	90-100	80-85	35-45	10-20
Orupa-----	0-6	silty clay loam	CL	A-7	0	0	100	100	80-100	80-100	40-50	20-30
	6-60	clay loam, silty clay, clay	CH, CL	A-7	0	0	100	100	80-100	80-90	40-55	20-30
0765: Umberland-----	0-5	silty clay	CH, CL	A-7	0	0	100	100	95-100	85-100	45-55	25-30
	5-60	silty clay loam, silty clay	CH, CL	A-7	0	0	100	100	95-100	85-100	40-55	25-30
Umberland-----	0-15	silty clay	CH, CL, ML, MH	A-7	0	0	100	100	95-100	85-95	45-55	20-25
	15-60	silty clay, silty clay loam, clay	CH, CL	A-7	0	0	100	100	95-100	85-95	40-55	20-30

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Wendane-----	0-8	silt loam	ML	A-4	0	0	100	100	90-100	70-85	30-40	NP-10
	8-42	silt loam, very fine sandy loam	ML	A-4	0	0	100	100	95-100	70-80	30-40	NP-10
	42-60	stratified silt loam to clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-95	35-45	10-20
0767: Umberland-----	0-15	silty clay	CL, CH, MH, ML	A-7	0	0	100	100	95-100	85-95	45-55	20-25
	15-60	silty clay, silty clay loam, clay	CH, CL	A-7	0	0	100	100	95-100	85-95	40-55	20-30
Umberland-----	0-5	silty clay	CH, CL	A-7	0	0	100	100	95-100	85-100	45-55	25-30
	5-60	silty clay loam, silty clay	CH, CL	A-7	0	0	100	100	95-100	85-100	40-55	25-30
Orupa-----	0-6	silty clay	CH, CL	A-7	0	0	100	100	80-100	80-100	45-60	25-40
	6-60	clay loam, silty clay, clay	CH, CL	A-7	0	0	100	100	80-100	80-90	40-55	20-30
0781: Mysol-----	0-5	silty clay loam	CL	A-6, A-7	0	0	100	100	85-95	80-90	35-45	15-20
	5-17	silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	75-95	60-75	30-45	10-20
	17-31	silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	75-95	60-75	30-45	10-20
	31-60	stratified very gravelly coarse sand to fine sandy loam	SM	A-4	0	0-10	75-100	70-100	60-70	35-50	---	NP
Benin-----	0-7	silt loam	CL-ML, ML	A-4	0	0	100	95-100	75-90	70-85	25-35	5-10
	7-60	clay, silty clay	CH, MH, CL	A-7	0	0	100	100	90-100	85-95	45-55	20-25
Wendane-----	0-8	silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-95	35-45	10-20
	8-42	silt loam, very fine sandy loam	ML	A-4	0	0	100	100	95-100	70-80	30-40	NP-10
	42-60	stratified silt loam to clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-95	35-45	10-20
0800: Mazuma-----	0-15	silt loam	ML	A-4	0	0	95-100	85-100	70-90	50-65	20-25	NP-5
	15-60	stratified gravelly coarse sand to silt loam	SM	A-4	0	0	95-100	80-100	70-90	35-50	20-25	NP-5
Toano-----	0-9	silt loam	ML	A-4, A-5	0	0	100	95-100	85-100	85-100	30-50	NP-5
	9-27	silt loam, very fine sandy loam	ML	A-4, A-5	0	0	100	95-100	95-100	70-95	30-50	NP-5
	27-60	silt loam, very fine sandy loam	ML	A-4, A-5	0	0	100	95-100	95-100	70-95	30-50	NP-5

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0801: Mazuma-----	0-15 15-60	silt loam stratified gravelly coarse sand to silt loam	ML SM	A-4 A-4	0 0	0 0	95-100 95-100	85-100 80-100	70-90 70-90	50-65 35-50	20-25 20-25	NP-5 NP-5
Zerk-----	0-2 2-16	gravelly loam gravelly loam, very gravelly loam	SM GM, SM	A-4 A-2, A-1, A-4	0 0	0 0-10	70-85 50-85	60-75 40-75	45-60 30-60	35-50 20-50	20-25 20-25	NP-5 NP-5
	16-60	stratified extremely gravelly coarse sand to extremely gravelly loamy sand	GP, GP-GM	A-1	0	15-30	25-40	15-30	5-15	0-10	---	NP
Okan-----	0-8 8-38 38-60	sandy loam sandy loam stratified extremely gravelly loamy sand	SM SM GM, GP-GM	A-2 A-2 A-1	0 0 0	0 0-10 0-15	90-95 90-95 30-45	85-95 85-95 25-40	50-60 50-60 10-30	25-35 25-35 5-15	15-25 15-25 ---	NP-5 NP-5 NP
0804: Mazuma-----	0-15 15-60	silt loam stratified gravelly coarse sand to silt loam	ML SM	A-4 A-4	0 0	0 0	95-100 95-100	85-100 80-100	70-90 70-90	50-65 35-50	20-25 20-25	NP-5 NP-5
Kawich-----	0-2 2-60	fine sand fine sand	SM SM	A-2 A-2	0 0	0 0	100 100	100 100	75-90 75-90	20-30 20-30	--- ---	NP NP
Playas-----	0-6 6-60	silty clay loam silty clay loam, clay, silty clay	CH, CL, ML, MH CH, MH, CL	A-7 A-7	0 0	0 0	100 100	100 100	100 100	90-100 90-100	40-55 45-75	15-25 20-40
0807: Mazuma-----	0-15 15-60	silt loam stratified gravelly coarse sand to silt loam	ML SM	A-4 A-4	0 0	0 0	95-100 95-100	85-100 80-100	70-90 70-90	50-65 35-50	20-25 20-25	NP-5 NP-5
Kunzler-----	0-5 5-48	loam fine sandy loam, sandy loam	CL-ML, ML SC-SM, SM	A-4 A-2, A-4	0 0	0 0	90-100 90-100	85-100 85-100	65-95 45-80	50-75 25-50	20-30 20-30	NP-10 NP-10
	48-60	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
Zerk-----	0-2 2-16	gravelly sandy loam gravelly loam, very gravelly loam	GM, SM GM, SM	A-1, A-2, A-4 A-2, A-1, A-4	0 0	0 0-10	55-80 50-85	50-75 40-75	40-60 30-60	20-40 20-50	20-25 20-25	NP-5 NP-5
	16-60	stratified extremely gravelly coarse sand to extremely gravelly loamy sand	GP, GP-GM	A-1	0	15-30	25-40	15-30	5-15	0-10	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct						
	In											
0823: Kunzler-----	0-16	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
	16-48	fine sandy loam, sandy loam	SC-SM, SM	A-2, A-4	0	0	90-100	85-100	45-80	25-50	20-30	NP-10
	48-60	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
Pyrat-----	0-6	gravelly sandy loam	GM, SM	A-2, A-4	0	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-14	very gravelly sandy loam	GM	A-1	0	0	40-60	25-50	20-40	10-25	15-25	NP-5
	14-21	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	25-50	20-45	15-35	15-25	NP-5
	21-42	very gravelly sandy loam	GM	A-1	0	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	42-60	stratified extremely gravelly loamy sand to very gravelly coarse sandy loam	GM, GP, GP-GM	A-1	0	0-15	15-50	10-45	5-35	0-15	---	NP
Blimo-----	0-8	gravelly loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-65	30-50	20-25	NP-5
	8-21	gravelly sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-60	25-45	20-25	NP-5
	21-36	gravelly sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-60	30-45	20-25	NP-5
	36-60	sandy loam	SM	A-4	0	0	80-100	75-95	60-70	35-50	20-25	NP-5
0824: Kunzler-----	0-16	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
	16-48	fine sandy loam, sandy loam	SC-SM, SM	A-2, A-4	0	0	90-100	85-100	45-80	25-50	20-30	NP-10
	48-60	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
Katelana-----	0-5	silt loam	CL-ML	A-4	0	0	100	100	65-85	60-80	20-30	5-10
	5-28	silt loam	CL	A-6	0	0	100	100	70-90	65-85	25-35	10-15
	28-32	stratified silt loam to silty clay loam	CL	A-6	0	0	100	100	95-100	75-85	25-40	10-20
	32-60	stratified clay loam to silty clay loam	CL	A-7	0	0	100	100	95-100	85-95	40-50	15-25
0827: Kunzler-----	0-16	silt loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
	16-48	fine sandy loam, sandy loam	SC-SM, SM	A-2, A-4	0	0	90-100	85-100	45-80	25-50	20-30	NP-10
	48-60	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
James Canyon----	0-8	fine sandy loam	SC-SM	A-4	0	0	100	100	75-90	35-50	20-25	5-10
	8-33	stratified gravelly loam to silt loam	GC, SC	A-2, A-6	0	0	60-85	50-75	40-60	25-40	25-35	10-15
	33-60	fine sandy loam	SC-SM	A-2, A-4	0	0	95-100	90-100	75-85	30-50	20-25	5-10
James Canyon----	0-31	loam	ML	A-4	0	0-5	90-100	75-85	65-75	55-65	25-35	NP-10
	31-60	stratified gravelly loam to clay loam	GM	A-4	0	0-5	65-75	60-70	55-65	40-50	25-35	NP-10

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0828: Kunzler-----	0-16	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
	16-48	fine sandy loam, sandy loam	SC-SM, SM	A-2, A-4	0	0	90-100	85-100	45-80	25-50	20-30	NP-10
	48-60	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
Pyrat-----	0-6	gravelly sandy loam	GM, SM	A-2, A-4	0	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-14	very gravelly sandy loam	GM	A-1	0	0	40-60	25-50	20-40	10-25	15-25	NP-5
	14-21	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	25-50	20-45	15-35	15-25	NP-5
	21-42	very gravelly sandy loam	GM	A-1	0	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	42-60	stratified extremely gravelly loamy sand to very gravelly coarse sandy loam	GM, GP-GM, GP	A-1	0	0-15	15-50	10-45	5-35	0-15	---	NP
Wendane-----	0-8	silt loam	ML	A-4	0	0	100	100	90-100	70-85	30-40	NP-10
	8-42	silt loam, very fine sandy loam	ML	A-4	0	0	100	100	95-100	70-80	30-40	NP-10
	42-60	stratified silt loam to clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-95	35-45	10-20
0830: Pharo-----	0-13	gravelly loam	GC-GM, SC-SM	A-4	0	0	55-80	50-75	40-60	35-50	25-30	5-10
	13-36	very gravelly loam, extremely gravelly sandy loam	GC-GM	A-2	0	0-5	25-40	20-35	15-30	10-20	20-30	5-10
	36-60	extremely gravelly coarse sand	GP, GP-GM	A-1	0	0-10	25-30	20-25	10-15	0-10	0-14	NP
Kzin-----	0-3	very gravelly loam	GC	A-2, A-6	0	0-15	40-50	35-50	30-45	25-40	25-35	10-15
	3-9	very gravelly sandy loam, very gravelly loam	GC, GC-GM	A-2, A-6, A-4	0	0-15	40-50	35-50	25-45	15-40	25-35	5-15
	9-13	weathered bedrock			---	---	---	---	---	---	---	---
Pharo-----	0-13	gravelly loam	GC-GM, SC-SM	A-4	0	0	55-80	50-75	40-60	35-50	25-30	5-10
	13-36	very gravelly loam, extremely gravelly sandy loam	GC-GM	A-2	0	0-5	25-40	20-35	15-30	10-20	20-30	5-10
	36-60	extremely gravelly coarse sand	GP, GP-GM	A-1	0	0-10	25-30	20-25	10-15	0-10	0-14	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0842: Katelana-----	0-5	silt loam	CL-ML	A-4	0	0	100	100	65-85	60-80	20-30	5-10
	5-28	silt loam	CL	A-6	0	0	100	100	70-90	65-85	25-35	10-15
	28-32	stratified silt loam to silty clay loam	CL	A-6	0	0	100	100	95-100	75-85	25-40	10-20
	32-60	stratified clay loam to silty clay loam	CL	A-7	0	0	100	100	95-100	85-95	40-50	15-25
Timpie-----	0-8	silt loam	CL-ML	A-4	0	0	100	100	95-100	65-95	25-30	5-10
	8-19	silt loam	CL-ML	A-4	0	0	100	100	95-100	80-95	25-30	5-10
	19-60	silt loam	CL-ML	A-4	0	0	100	100	95-100	80-95	25-30	5-10
0843: Katelana-----	0-5	silt loam	CL-ML	A-4	0	0	100	100	65-85	60-80	20-30	5-10
	5-28	silt loam	CL	A-6	0	0	100	100	70-90	65-85	25-35	10-15
	28-32	stratified silt loam to silty clay loam	CL	A-6	0	0	100	100	95-100	75-85	25-40	10-20
	32-60	stratified clay loam to silty clay loam	CL	A-7	0	0	100	100	95-100	85-95	40-50	15-25
Kawich-----	0-2	fine sand	SM	A-2	0	0	100	100	75-90	20-30	---	NP
	2-60	fine sand	SM	A-2	0	0	100	100	75-90	20-30	---	NP
0845: Katelana-----	0-5	silt loam	CL-ML	A-4	0	0	100	100	65-85	60-80	20-30	5-10
	5-28	silt loam	CL	A-6	0	0	100	100	70-90	65-85	25-35	10-15
	28-32	stratified silt loam to silty clay loam	CL	A-6	0	0	100	100	95-100	75-85	25-40	10-20
	32-60	stratified clay loam to silty clay loam	CL	A-7	0	0	100	100	95-100	85-95	40-50	15-25
Ragtown-----	0-5	silt loam	CL	A-6	0	0	100	100	95-100	85-95	30-40	10-15
	5-26	stratified sandy clay loam to silty clay loam	CL	A-6, A-7	0	0	100	100	80-95	50-75	35-45	15-20
	26-60	stratified silty clay loam to clay	CH, CL, MH	A-7	0	0	100	100	90-100	75-85	40-55	20-25
Timpie-----	0-8	silt loam	CL-ML	A-4	0	0	100	100	95-100	65-95	25-30	5-10
	8-19	silt loam	CL-ML	A-4	0	0	100	100	95-100	80-95	25-30	5-10
	19-60	silt loam	CL-ML	A-4	0	0	100	100	95-100	80-95	25-30	5-10
0847: Mazuma-----	0-15	silt loam	ML	A-4	0	0	95-100	85-100	70-90	50-65	20-25	NP-5
	15-60	stratified gravelly coarse sand to silt loam	SM	A-4	0	0	95-100	80-100	70-90	35-50	20-25	NP-5
Blimo-----	0-7	silt loam	ML	A-4	0	0	90-100	85-100	60-85	55-75	20-25	NP-5
	7-25	gravelly sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-60	30-45	20-25	NP-5
	25-40	gravelly sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-60	30-45	20-25	NP-5
	40-60	stratified extremely gravelly loamy coarse sand to gravelly coarse sandy loam	GM	A-1, A-2	0	0	55-65	50-60	30-40	20-30	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Wintermute-----	0-3	gravelly silt loam	GM, ML	A-4	0	0-10	60-85	50-75	45-65	35-60	15-25	NP-5
	3-15	gravelly silt loam, gravelly fine sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-65	30-50	15-25	NP-5
	15-53	stratified extremely cobble loamy sand to very gravelly sandy loam	GM, GP-GM	A-1	0-15	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
	53-60	gravelly silty clay loam	CL, GC	A-6	0-10	0-10	60-85	50-75	45-70	45-65	30-40	10-15
0850: Palinor-----	0-8	very gravelly loam	GM	A-1, A-2	0	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34	indurated			---	---	---	---	---	---	---	---
	34-60	stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	0	0-30	30-50	20-45	15-35	10-30	---	NP
Wintermute-----	0-3	gravelly silt loam	GM, ML	A-4	0	0-10	60-85	50-75	45-65	35-60	15-25	NP-5
	3-15	gravelly silt loam, gravelly fine sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-65	30-50	15-25	NP-5
	15-53	stratified extremely cobble loamy sand to very gravelly sandy loam	GM, GP-GM	A-1	0-15	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
	53-60	gravelly silty clay loam	CL, GC	A-6	0-10	0-10	60-85	50-75	45-70	45-65	30-40	10-15
Okan-----	0-8	sandy loam	SM	A-2	0	0	90-95	85-95	50-60	25-35	15-25	NP-5
	8-38	sandy loam	SM	A-2	0	0-10	90-95	85-95	50-60	25-35	15-25	NP-5
	38-60	stratified extremely gravelly loamy sand	GM, GP-GM	A-1	0	0-15	30-45	25-40	10-30	5-15	---	NP
0851: Palinor-----	0-8	very gravelly loam	GM	A-1, A-2	0	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34	indurated			---	---	---	---	---	---	---	---
	34-60	stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	0	0-30	30-50	20-45	15-35	10-30	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Zimbov-----	0-1	very gravelly loam	GM	A-1, A-2	0	0-5	50-60	30-50	25-40	15-30	20-25	NP-5
	1-6	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0-5	50-60	30-50	25-40	20-35	20-25	NP-5
	6-10	unweathered bedrock			---	---	---	---	---	---	---	---
Tecomar-----	0-2	extremely gravelly loam	GC	A-2	0	5-30	20-35	15-30	10-25	10-20	25-35	10-15
	2-14	extremely cobbly silt loam, very cobbly silt loam	GC	A-2, A-6	0-15	45-60	35-55	20-45	15-40	10-40	25-35	10-15
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
0852: Palinor-----	0-8	very gravelly loam	GM	A-1, A-2	0	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34	indurated stratified			---	---	---	---	---	---	---	---
	34-60	extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	0	0-30	30-50	20-45	15-35	10-30	---	NP
Pyrat-----	0-6	gravelly sandy loam	GM, SM	A-2, A-4	0	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-14	very gravelly sandy loam	GM	A-1	0	0	40-60	25-50	20-40	10-25	15-25	NP-5
	14-21	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	25-50	20-45	15-35	15-25	NP-5
	21-42	very gravelly sandy loam	GM	A-1	0	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	42-60	stratified extremely gravelly loamy sand to very gravelly coarse sandy loam	GP, GM, GP-GM	A-1	0	0-15	15-50	10-45	5-35	0-15	---	NP
Shabliss-----	0-2	gravelly fine sandy loam	SM	A-2, A-4	0	0	68-85	55-75	50-65	25-45	20-25	NP-5
	2-15	loam, very fine sandy loam	ML	A-4	0	0	95-100	90-100	85-95	50-65	15-20	NP-5
	15-31	cemented			---	---	---	---	---	---	---	---
	31-60	very gravelly loamy sand	GM	A-1	0	0-15	35-55	30-50	15-30	10-20	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

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TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0857: Palinor-----	0-8	very gravelly loam	GM	A-1, A-2	0	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34	indurated			---	---	---	---	---	---	---	---
	34-60	stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	0	0-30	30-50	20-45	15-35	10-30	---	NP
Shabliss-----	0-2	gravelly fine sandy loam	SM	A-2, A-4	0	0	68-85	55-75	50-65	25-45	20-25	NP-5
	2-15	loam, very fine sandy loam	ML	A-4	0	0	95-100	90-100	85-95	50-65	15-20	NP-5
	15-31	cemented			---	---	---	---	---	---	---	---
	31-60	very gravelly loamy sand	GM	A-1	0	0-15	35-55	30-50	15-30	10-20	---	NP
Linoyer-----	0-9	silt loam	CL-ML, ML	A-4	0	0	100	100	85-100	70-90	15-25	NP-10
	9-60	very fine sandy loam, silt loam	CL-ML, ML	A-4	0	0	100	100	95-100	80-95	15-25	NP-10
0858: Palinor-----	0-8	very gravelly loam	GM	A-1, A-2	0	0-10	30-50	25-50	25-45	20-35	20-25	NP-5
	8-16	extremely gravelly loam, very gravelly loam	GM	A-1, A-2	0	0-10	20-45	15-40	10-35	10-30	20-25	NP-5
	16-34	indurated			---	---	---	---	---	---	---	---
	34-60	stratified extremely gravelly coarse sand to gravelly sandy loam	GM	A-1, A-2	0	0-30	30-50	20-45	15-35	10-30	---	NP
Automal-----	0-8	gravelly silt loam	CL-ML, GC-GM, ML, GM	A-4	0-5	0-5	60-85	50-75	45-70	35-65	25-35	5-10
	8-49	very gravelly sandy loam, extremely gravelly sandy loam, very gravelly silt loam	GC-GM, GM, GP-GM	A-1, A-2	0-15	15-30	25-50	15-40	10-35	5-30	20-30	NP-10
	49-60	extremely gravelly loamy coarse sand, extremely gravelly coarse sandy loam	GP, GP-GM	A-1	0-10	0-5	25-35	15-25	5-15	0-10	15-25	NP-5
Linoyer-----	0-9	silt loam	CL-ML, ML	A-4	0	0	100	100	85-100	70-90	15-25	NP-10
	9-60	very fine sandy loam, silt loam	CL-ML, ML	A-4	0	0	100	100	95-100	80-95	15-25	NP-10

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0870: Theriot-----	0-7	very gravelly silt loam	GM	A-1, A-2	0	0-10	30-55	25-50	20-40	15-35	15-25	NP-5
	7-18	very stony loam, very cobbly fine sandy loam, very cobbly loam	GM	A-2, A-4	5-25	25-45	40-75	35-70	30-60	25-50	15-25	NP-5
	18-22	unweathered bedrock			---	---	---	---	---	---	---	---
Zimbob-----	0-2	very gravelly loam	GM	A-1, A-2	0	0-10	50-65	30-50	25-40	20-35	20-25	NP-5
	2-11	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0-15	40-60	30-50	25-40	20-35	20-25	NP-5
	11-15	unweathered bedrock			---	---	---	---	---	---	---	---
0880: Duffer-----	0-4	silt loam	CL	A-6	0	0	100	100	95-100	85-95	30-35	10-15
	4-60	silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	30-45	10-20
Duffer-----	0-25	silty clay loam	CL	A-6	0	0	100	100	95-100	85-95	35-40	15-20
	25-60	silt loam, silty clay loam	CL	A-6	0	0	100	100	95-100	85-95	30-40	10-20
Kolda-----	0-4	silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	70-90	25-35	5-15
	4-11	silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	65-90	25-35	5-15
	11-60	clay, silty clay	CH, CL	A-7	0	0	100	100	95-100	90-100	45-60	20-30
0881: Duffer-----	0-4	silt loam	CL	A-6	0	0	100	100	95-100	85-95	30-35	10-15
	4-60	silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	30-45	10-20
Kunzler-----	0-16	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
	16-48	fine sandy loam, sandy loam	SC-SM, SM	A-2, A-4	0	0	90-100	85-100	45-80	25-50	20-30	NP-10
	48-60	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
0882: Duffer-----	0-25	silty clay loam	CL	A-6	0	0	100	100	95-100	85-95	35-40	15-20
	25-60	silt loam, silty clay loam	CL	A-6	0	0	100	100	95-100	85-95	30-40	10-20
Kolda-----	0-4	silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	70-90	25-35	5-15
	4-11	silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-100	65-90	25-35	5-15
	11-60	clay, silty clay	CH, CL	A-7	0	0	100	100	95-100	90-100	45-60	20-30

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0894: Zerk-----	0-2	gravelly sandy loam	GM, SM	A-1, A-2, A-4	0	0	55-80	50-75	40-60	20-40	20-25	NP-5
	2-16	gravelly loam, very gravelly loam	GM, SM	A-2, A-1, A-4	0	0-10	50-85	40-75	30-60	20-50	20-25	NP-5
	16-60	stratified extremely gravelly coarse sand to extremely gravelly loamy sand	GP, GP-GM	A-1	0	15-30	25-40	15-30	5-15	0-10	---	NP
Threesee-----	0-3	very gravelly sandy loam	GC-GM	A-2	0	0	30-55	25-50	20-40	10-20	20-25	5-10
	3-14	gravelly loam	GC-GM, SC-SM	A-2, A-4	0	0	55-80	50-75	40-60	30-50	20-30	5-10
	14-46	very gravelly loamy sand	GM	A-1	0	0	45-60	30-50	20-35	10-25	---	NP
	46-60	stratified very gravelly coarse sand	SM, SP-SM	A-1	0	0	55-70	45-60	15-25	5-15	---	NP
Mazuma-----	0-15	silt loam	ML	A-4	0	0	95-100	85-100	70-90	50-65	20-25	NP-5
	15-60	stratified gravelly coarse sand to silt loam	SM	A-4	0	0	95-100	80-100	70-90	35-50	20-25	NP-5
0900: Zerk-----	0-2	gravelly sandy loam	GM, SM	A-1, A-2, A-4	0	0	55-80	50-75	40-60	20-40	20-25	NP-5
	2-16	gravelly loam, very gravelly loam	GM, SM	A-2, A-1, A-4	0	0-10	50-85	40-75	30-60	20-50	20-25	NP-5
	16-60	stratified extremely gravelly coarse sand to extremely gravelly loamy sand	GP, GP-GM	A-1	0	15-30	25-40	15-30	5-15	0-10	---	NP
Automal-----	0-8	gravelly silt loam	GC-GM, CL-ML, GM, ML	A-4	0-5	0-5	60-85	50-75	45-70	35-65	25-35	5-10
	8-49	very gravelly sandy loam, extremely gravelly sandy loam, very gravelly silt loam	GM, GC-GM, GP-GM	A-1, A-2	0-15	15-30	25-50	15-40	10-35	5-30	20-30	NP-10
	49-60	extremely gravelly loamy coarse sand, extremely gravelly coarse sandy loam	GP, GP-GM	A-1	0-10	0-5	25-35	15-25	5-15	0-10	15-25	NP-5
Linoyer-----	0-9	silt loam	CL-ML, ML	A-4	0	0	100	100	85-100	70-90	15-25	NP-10
	9-60	very fine sandy loam, silt loam	CL-ML, ML	A-4	0	0	100	100	95-100	80-95	15-25	NP-10

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
0910: Ragtown-----	0-16	silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	80-95	35-45	20-30
	16-60	stratified silty clay loam to clay	CH, CL	A-7	0	0	100	100	90-100	75-95	45-65	30-50
Ragtown-----	0-5	silt loam	CL	A-6	0	0	100	100	95-100	85-95	30-40	10-15
	5-26	stratified sandy clay loam to silty clay loam	CL	A-6, A-7	0	0	100	100	80-95	50-75	35-45	15-20
	26-60	stratified silty clay loam to clay	CL, CH, MH	A-7	0	0	100	100	90-100	75-85	40-55	20-25
0912: Katelana-----	0-5	silt loam	CL-ML	A-4	0	0	100	100	65-85	60-80	20-30	5-10
	5-28	silt loam	CL	A-6	0	0	100	100	70-90	65-85	25-35	10-15
	28-32	stratified silt loam to silty clay loam	CL	A-6	0	0	100	100	95-100	75-85	25-40	10-20
	32-60	stratified clay loam to silty clay loam	CL	A-7	0	0	100	100	95-100	85-95	40-50	15-25
Katelana-----	0-5	silt loam	CL-ML	A-4	0	0	100	100	65-85	60-80	20-30	5-10
	5-28	silt loam	CL	A-6	0	0	100	100	70-90	65-85	25-35	10-15
	28-32	stratified silt loam to silty clay loam	CL	A-6	0	0	100	100	95-100	75-85	25-40	10-20
	32-60	stratified clay loam to silty clay loam	CL	A-7	0	0	100	100	95-100	85-95	40-50	15-25
0914: Katelana-----	0-5	silt loam	CL-ML	A-4	0	0	100	100	65-85	60-80	20-30	5-10
	5-28	silt loam	CL	A-6	0	0	100	100	70-90	65-85	25-35	10-15
	28-32	stratified silt loam to silty clay loam	CL	A-6	0	0	100	100	95-100	75-85	25-40	10-20
	32-60	stratified clay loam to silty clay loam	CL	A-7	0	0	100	100	95-100	85-95	40-50	15-25
Benin-----	0-7	silt loam	CL-ML, ML	A-4	0	0	100	95-100	75-90	70-85	25-35	5-10
	7-60	clay, silty clay	CH, MH, CL	A-7	0	0	100	100	90-100	85-95	45-55	20-25
Sheffit-----	0-4	sandy loam	SM	A-4	0	0	100	90-100	70-80	40-50	20-25	NP-5
	4-60	stratified silt loam to clay	CL, MH, ML	A-7	0	0	100	95-100	90-100	85-95	40-60	15-25
0917: Katelana-----	0-5	silt loam	CL-ML	A-4	0	0	100	100	65-85	60-80	20-30	5-10
	5-28	silt loam	CL	A-6	0	0	100	100	70-90	65-85	25-35	10-15
	28-32	stratified silt loam to silty clay loam	CL	A-6	0	0	100	100	95-100	75-85	25-40	10-20
	32-60	stratified clay loam to silty clay loam	CL	A-7	0	0	100	100	95-100	85-95	40-50	15-25
Sheffit-----	0-4	silt loam	CL-ML, ML	A-4	0	0	100	95-100	80-100	65-85	25-35	5-10
	4-60	stratified silt loam to clay	CL, MH, ML	A-7	0	0	100	95-100	90-100	85-95	40-60	15-25

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Ragtown-----	0-16	silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	80-95	35-45	20-30
	16-60	stratified silty clay loam to clay	CH, CL	A-7	0	0	100	100	90-100	75-95	45-65	30-50
0918:												
Katelana-----	0-5	silt loam	CL-ML	A-4	0	0	100	100	65-85	60-80	20-30	5-10
	5-28	silt loam	CL	A-6	0	0	100	100	70-90	65-85	25-35	10-15
	28-32	stratified silt loam to silty clay loam	CL	A-6	0	0	100	100	95-100	75-85	25-40	10-20
	32-60	stratified clay loam to silty clay loam	CL	A-7	0	0	100	100	95-100	85-95	40-50	15-25
Zorravista-----	0-6	loamy fine sand	SM	A-2	0	0	100	100	75-90	10-35	---	NP
	6-60	fine sand, sand	SM, SP-SM	A-2, A-3	0	0	100	100	65-80	5-30	---	NP
Playas-----	0-6	silty clay loam	CL, CH, MH, ML	A-7	0	0	100	100	100	90-100	40-55	15-25
	6-60	silty clay loam, clay, silty clay	CL, CH, MH	A-7	0	0	100	100	100	90-100	45-75	20-40
0930:												
Okan-----	0-8	sandy loam	SM	A-2	0	0	90-95	85-95	50-60	25-35	15-25	NP-5
	8-38	sandy loam	SM	A-2	0	0-10	90-95	85-95	50-60	25-35	15-25	NP-5
	38-60	stratified extremely gravelly loamy sand	GM, GP-GM	A-1	0	0-15	30-45	25-40	10-30	5-15	---	NP
Toano-----	0-9	silt loam	ML	A-4, A-5	0	0	100	95-100	85-100	85-100	30-50	NP-5
	9-27	silt loam, very fine sandy loam	ML	A-4, A-5	0	0	100	95-100	95-100	70-95	30-50	NP-5
	27-60	silt loam, very fine sandy loam	ML	A-4, A-5	0	0	100	95-100	95-100	70-95	30-50	NP-5
Loray-----	0-12	gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	60-80	55-75	45-60	20-30	20-25	NP-5
	12-60	stratified extremely gravelly coarse sand to extremely gravelly loamy fine sand	GP, GP-GM	A-1	0	0-15	20-35	10-25	5-20	0-10	---	NP
0932:												
Okan-----	0-8	sandy loam	SM	A-2	0	0	90-95	85-95	50-60	25-35	15-25	NP-5
	8-38	sandy loam	SM	A-2	0	0-10	90-95	85-95	50-60	25-35	15-25	NP-5
	38-60	stratified extremely gravelly loamy sand	GM, GP-GM	A-1	0	0-15	30-45	25-40	10-30	5-15	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Pyrat-----	0-6	gravelly sandy loam	GM, SM	A-2, A-4	0	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-14	very gravelly sandy loam	GM	A-1	0	0	40-60	25-50	20-40	10-25	15-25	NP-5
	14-21	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	25-50	20-45	15-35	15-25	NP-5
	21-42	very gravelly sandy loam	GM	A-1	0	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	42-60	stratified extremely gravelly loamy sand to very gravelly coarse sandy loam	GM, GP, GP-GM	A-1	0	0-15	15-50	10-45	5-35	0-15	---	NP
0941: Sheffit-----	0-4	silt loam	CL-ML, ML	A-4	0	0	100	95-100	80-100	65-85	25-35	5-10
	4-60	stratified silt loam to clay	CL, MH, ML	A-7	0	0	100	95-100	90-100	85-95	40-60	15-25
Sheffit-----	0-10	fine sandy loam	ML	A-4	0	0	100	95-100	80-90	50-70	20-25	NP-5
	10-60	stratified silt loam to clay	CL, ML, MH	A-7	0	0	100	95-100	90-100	85-95	40-60	15-25
Zorravista-----	0-6	loamy fine sand	SM	A-2	0	0	100	100	75-90	10-35	---	NP
	6-60	fine sand, sand	SM, SP-SM	A-2, A-3	0	0	100	100	65-80	5-30	---	NP
0943: Sheffit-----	0-4	silt loam	CL-ML, ML	A-4	0	0	100	95-100	80-100	65-85	25-35	5-10
	4-60	stratified silt loam to clay	CL, MH, ML	A-7	0	0	100	95-100	90-100	85-95	40-60	15-25
Umberland-----	0-15	silty clay	CL, MH, CH, ML	A-7	0	0	100	100	95-100	85-95	45-55	20-25
	15-60	silty clay, silty clay loam, clay	CH, CL	A-7	0	0	100	100	95-100	85-95	40-55	20-30
0960: Gravier-----	0-3	very gravelly sandy loam	GM	A-1, A-2	0	0	40-65	35-50	25-40	10-30	15-25	NP-5
	3-60	stratified extremely gravelly coarse sandy loam to very gravelly loam	GM	A-1	0	0-15	30-55	25-50	15-35	10-25	15-25	NP-5
Zerk-----	0-2	gravelly sandy loam	GM, SM	A-1, A-2, A-4	0	0	55-80	50-75	40-60	20-40	20-25	NP-5
	2-16	gravelly loam, very gravelly loam	GM, SM	A-2, A-1, A-4	0	0-10	50-85	40-75	30-60	20-50	20-25	NP-5
	16-60	stratified extremely gravelly coarse sand to extremely gravelly loamy sand	GP, GP-GM	A-1	0	15-30	25-40	15-30	5-15	0-10	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Tecomar-----	0-2	extremely gravelly loam	GC	A-2	0	5-30	20-35	15-30	10-25	10-20	25-35	10-15
	2-14	extremely cobblely silt loam, very cobblely silt loam	GC	A-2, A-6	0-15	45-60	35-55	20-45	15-40	10-40	25-35	10-15
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
1000: Pyrat-----	0-6	gravelly sandy loam	GM, SM	A-2, A-4	0	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-14	very gravelly sandy loam	GM	A-1	0	0	40-60	25-50	20-40	10-25	15-25	NP-5
	14-21	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	25-50	20-45	15-35	15-25	NP-5
	21-42	very gravelly sandy loam	GM	A-1	0	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	42-60	stratified extremely gravelly loamy sand to very gravelly coarse sandy loam	GM, GP-GM, GP	A-1	0	0-15	15-50	10-45	5-35	0-15	---	NP
Zerk-----	0-2	gravelly sandy loam	GM, SM	A-1, A-4, A-2	0	0	55-80	50-75	40-60	20-40	20-25	NP-5
	2-16	gravelly loam, very gravelly loam	GM, SM	A-1, A-2, A-4	0	0-10	50-85	40-75	30-60	20-50	20-25	NP-5
	16-60	stratified extremely gravelly coarse sand to extremely gravelly loamy sand	GP, GP-GM	A-1	0	15-30	25-40	15-30	5-15	0-10	---	NP
1001: Pyrat-----	0-6	gravelly sandy loam	GM, SM	A-2, A-4	0	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-14	very gravelly sandy loam	GM	A-1	0	0	40-60	25-50	20-40	10-25	15-25	NP-5
	14-21	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	25-50	20-45	15-35	15-25	NP-5
	21-42	very gravelly sandy loam	GM	A-1	0	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	42-60	stratified extremely gravelly loamy sand to very gravelly coarse sandy loam	GM, GP-GM, GP	A-1	0	0-15	15-50	10-45	5-35	0-15	---	NP
Okan-----	0-8	sandy loam	SM	A-2	0	0	90-95	85-95	50-60	25-35	15-25	NP-5
	8-38	sandy loam	SM	A-2	0	0-10	90-95	85-95	50-60	25-35	15-25	NP-5
	38-60	stratified extremely gravelly loamy sand	GM, GP-GM	A-1	0	0-15	30-45	25-40	10-30	5-15	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Eastwell-----	0-5	gravelly sandy loam	SM	A-2, A-1, A-4	0	0-5	65-80	60-75	40-60	20-40	20-25	NP-5
	5-18	very gravelly loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-2	0	0-10	40-60	35-50	20-40	10-30	20-35	NP-15
	18-27	cemented			---	---	---	---	---	---	---	---
	27-60	very gravelly loam, very cobbly loam	GC-GM, GM	A-2, A-4	0-5	15-45	50-70	45-60	35-55	30-50	20-30	NP-10
1002: Threesee-----	0-3	very gravelly loamy coarse sand	GM, GP-GM	A-1	0	0	30-55	25-50	10-30	5-15	---	NP
	3-14	gravelly loam	GC-GM, SC-SM	A-2, A-4	0	0	55-80	50-75	40-60	30-50	20-30	5-10
	14-46	very gravelly loamy sand	GM	A-1	0	0	45-60	30-50	20-35	10-25	---	NP
	46-60	stratified very gravelly coarse sand	SM, SP-SM	A-1	0	0	55-70	45-60	15-25	5-15	---	NP
Kunzler-----	0-5	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
	5-48	fine sandy loam, sandy loam	SC-SM, SM	A-2, A-4	0	0	90-100	85-100	45-80	25-50	20-30	NP-10
	48-60	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
Threesee-----	0-3	very gravelly sandy loam	GC-GM	A-2	0	0	30-55	25-50	20-40	10-20	20-25	5-10
	3-14	gravelly loam	GC-GM, SC-SM	A-2, A-4	0	0	55-80	50-75	40-60	30-50	20-30	5-10
	14-46	very gravelly loamy sand	GM	A-1	0	0	45-60	30-50	20-35	10-25	---	NP
	46-60	stratified very gravelly coarse sand	SM, SP-SM	A-1	0	0	55-70	45-60	15-25	5-15	---	NP
1003: Pyrat-----	0-6	gravelly sandy loam	GM, SM	A-2, A-4	0	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-14	very gravelly sandy loam	GM	A-1	0	0	40-60	25-50	20-40	10-25	15-25	NP-5
	14-21	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	25-50	20-45	15-35	15-25	NP-5
	21-42	very gravelly sandy loam	GM	A-1	0	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	42-60	stratified extremely gravelly loamy sand to very gravelly coarse sandy loam	GM, GP, GP-GM	A-1	0	0-15	15-50	10-45	5-35	0-15	---	NP
Hundraw-----	0-5	gravelly fine sandy loam	GM, GC-GM, SC-SM, SM	A-1, A-2, A-4	0	0	60-80	55-75	40-60	20-40	20-30	NP-10
	5-10	fine sandy loam, loam	CL-ML, SM, ML, SC-SM	A-2, A-4	0	0	80-95	75-90	55-80	30-70	20-30	NP-10
	10-14	weathered bedrock			---	---	---	---	---	---	---	---
Tulase-----	0-2	very fine sandy loam	CL-ML, ML	A-4	0	0	100	100	95-100	60-70	15-25	NP-10
	2-60	very fine sandy loam, silt loam	CL-ML, ML	A-4	0	0	95-100	90-100	85-100	70-85	15-25	NP-10

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1004: Pyrat-----	0-6	gravelly sandy loam	GM, SM	A-2, A-4	0	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-14	very gravelly sandy loam	GM	A-1	0	0	40-60	25-50	20-40	10-25	15-25	NP-5
	14-21	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	25-50	20-45	15-35	15-25	NP-5
	21-42	very gravelly sandy loam	GM	A-1	0	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	42-60	stratified extremely gravelly loamy sand to very gravelly coarse sandy loam	GP, GM, GP-GM	A-1	0	0-15	15-50	10-45	5-35	0-15	---	NP
Parisa-----	0-5	gravelly loam	GM, SM	A-2, A-4	0	0-10	60-85	50-75	40-65	30-50	20-30	NP-5
	5-36	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0-10	35-60	25-50	20-40	15-35	20-30	NP-5
	36-55 55-60	indurated extremely gravelly coarse sandy loam	GP, GP-GM	A-1	---	---	---	---	---	---	---	---
Tulase-----	0-2	very fine sandy loam	CL-ML, ML	A-4	0	0	100	100	95-100	60-70	15-25	NP-10
	2-60	very fine sandy loam, silt loam	CL-ML, ML	A-4	0	0	95-100	90-100	85-100	70-85	15-25	NP-10
1005: Pyrat-----	0-6	gravelly sandy loam	GM, SM	A-2, A-4	0	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-14	very gravelly sandy loam	GM	A-1	0	0	40-60	25-50	20-40	10-25	15-25	NP-5
	14-21	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	25-50	20-45	15-35	15-25	NP-5
	21-42	very gravelly sandy loam	GM	A-1	0	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	42-60	stratified extremely gravelly loamy sand to very gravelly coarse sandy loam	GM, GP, GP-GM	A-1	0	0-15	15-50	10-45	5-35	0-15	---	NP
Zerk-----	0-2	gravelly fine sandy loam	SM	A-2, A-4	0	0	65-85	55-75	45-65	30-50	20-25	NP-5
	2-16	gravelly loam, very gravelly loam	GM, SM	A-1, A-2, A-4	0	0-10	50-85	40-75	30-60	20-50	20-25	NP-5
	16-60	stratified extremely gravelly coarse sand to extremely gravelly loamy sand	GP, GP-GM	A-1	0	15-30	25-40	15-30	5-15	0-10	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth In	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit Pct	Plas- ticity index
			Unified	AASHTO	>10 inches Pct	3-10 inches Pct	4	10	40	200		
Parisa-----	0-5	gravelly loam	GM, SM	A-2, A-4	0	0-10	60-85	50-75	40-65	30-50	20-30	NP-5
	5-36	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0-10	35-60	25-50	20-40	15-35	20-30	NP-5
	36-55	indurated			---	---	---	---	---	---	---	---
	55-60	extremely gravelly coarse sandy loam	GP, GP-GM	A-1	0	0-15	15-35	10-25	5-15	0-10	---	NP
1006: Pyrat-----	0-6	gravelly sandy loam	GM, SM	A-2, A-4	0	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-14	very gravelly sandy loam	GM	A-1	0	0	40-60	25-50	20-40	10-25	15-25	NP-5
	14-21	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	25-50	20-45	15-35	15-25	NP-5
	21-42	very gravelly sandy loam	GM	A-1	0	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	42-60	stratified extremely gravelly loamy sand to very gravelly coarse sandy loam	GM, GP-GM, GP	A-1	0	0-15	15-50	10-45	5-35	0-15	---	NP
Blimo-----	0-7	sandy loam	SM	A-4	0	0	90-100	85-100	60-75	40-50	20-25	NP-5
	7-25	gravelly sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-60	30-45	20-25	NP-5
	25-40	gravelly sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-60	30-45	20-25	NP-5
	40-60	stratified extremely gravelly loamy coarse sand to gravelly coarse sandy loam	GM	A-1, A-2	0	0	55-65	50-60	30-40	20-30	---	NP
1007: Pyrat-----	0-6	gravelly sandy loam	GM, SM	A-2, A-4	0	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-14	very gravelly sandy loam	GM	A-1	0	0	40-60	25-50	20-40	10-25	15-25	NP-5
	14-21	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	25-50	20-45	15-35	15-25	NP-5
	21-42	very gravelly sandy loam	GM	A-1	0	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	42-60	stratified extremely gravelly loamy sand to very gravelly coarse sandy loam	GP, GM, GP-GM	A-1	0	0-15	15-50	10-45	5-35	0-15	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Parisa-----	0-5	gravelly loam	GM, SM	A-2, A-4	0	0-10	60-85	50-75	40-65	30-50	20-30	NP-5
	5-36	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0-10	35-60	25-50	20-40	15-35	20-30	NP-5
	36-55	indurated			---	---	---	---	---	---	---	---
	55-60	extremely gravelly coarse sandy loam	GP, GP-GM	A-1	0	0-15	15-35	10-25	5-15	0-10	---	NP
Automal-----	0-8	gravelly silt loam	GC-GM, GM, CL-ML, ML	A-4	0-5	0-5	60-85	50-75	45-70	35-65	25-35	5-10
	8-49	very gravelly sandy loam, extremely gravelly sandy loam, very gravelly silt loam	GM, GC-GM, GP-GM	A-1, A-2	0-15	15-30	25-50	15-40	10-35	5-30	20-30	NP-10
	49-60	extremely gravelly loamy coarse sand, extremely gravelly coarse sandy loam	GP, GP-GM	A-1	0-10	0-5	25-35	15-25	5-15	0-10	15-25	NP-5
1009: Pyrat-----	0-6	gravelly sandy loam	GM, SM	A-2, A-4	0	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-14	very gravelly sandy loam	GM	A-1	0	0	40-60	25-50	20-40	10-25	15-25	NP-5
	14-21	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	25-50	20-45	15-35	15-25	NP-5
	21-42	very gravelly sandy loam	GM	A-1	0	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	42-60	stratified extremely gravelly loamy sand to very gravelly coarse sandy loam	GM, GP-GM, GP	A-1	0	0-15	15-50	10-45	5-35	0-15	---	NP
Tulase-----	0-2	very fine sandy loam	CL-ML, ML	A-4	0	0	100	100	95-100	60-70	15-25	NP-10
	2-60	very fine sandy loam, silt loam	CL-ML, ML	A-4	0	0	95-100	90-100	85-100	70-85	15-25	NP-10
Wintermute-----	0-3	gravelly silt loam	GM, ML	A-4	0	0-10	60-85	50-75	45-65	35-60	15-25	NP-5
	3-15	gravelly silt loam, gravelly fine sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-65	30-50	15-25	NP-5
	15-53	stratified extremely cobble loamy sand to very gravelly sandy loam	GM, GP-GM	A-1	0-15	15-45	25-55	15-45	10-35	5-25	15-25	NP-5
	53-60	gravelly silty clay loam	CL, GC	A-6	0-10	0-10	60-85	50-75	45-70	45-65	30-40	10-15

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

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TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1161: Pharo-----	0-13	gravelly loam	GC-GM, SC-SM	A-4	0	0	55-80	50-75	40-60	35-50	25-30	5-10
	13-36	very gravelly loam, extremely gravelly sandy loam	GC-GM	A-2	0	0-5	25-40	20-35	15-30	10-20	20-30	5-10
	36-60	extremely gravelly coarse sand	GP, GP-GM	A-1	0	0-10	25-30	20-25	10-15	0-10	0-14	NP
Bobs-----	0-8	gravelly loam	GM, ML, SM	A-4	0	0-15	70-80	65-75	55-70	40-55	20-25	NP-5
	8-13	gravelly loam, gravelly very fine sandy loam, gravelly silt loam	GM, SM	A-4	0	0-15	60-80	50-75	45-70	35-50	20-25	NP-5
	13-17	indurated			---	---	---	---	---	---	---	---
Pookaloo-----	0-2	very gravelly loam	GM	A-2	0	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	2-14	very gravelly loam, very gravelly silt loam	GM	A-2, A-4	0	0	50-60	35-50	35-45	25-40	20-25	NP-5
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
1171: Pyrat-----	0-6	gravelly sandy loam	GM, SM	A-2, A-4	0	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-14	very gravelly sandy loam	GM	A-1	0	0	40-60	25-50	20-40	10-25	15-25	NP-5
	14-21	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	25-50	20-45	15-35	15-25	NP-5
	21-42	very gravelly sandy loam	GM	A-1	0	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	42-60	stratified extremely gravelly loamy sand to very gravelly coarse sandy loam	GM, GP, GP-GM	A-1	0	0-15	15-50	10-45	5-35	0-15	---	NP
Automal-----	0-8	gravelly loam	GM, GC-GM, SC-SM, SM	A-2, A-4	0	0	55-80	50-75	35-60	30-50	25-35	5-10
	8-49	very gravelly sandy loam, extremely gravelly sandy loam, very gravelly silt loam	GM, GC-GM, GP-GM	A-1, A-2	0-15	15-30	25-50	15-40	10-35	5-30	20-30	NP-10
	49-60	extremely gravelly loamy coarse sand, extremely gravelly coarse sandy loam	GP, GP-GM	A-1	0-10	0-5	25-35	15-25	5-15	0-10	15-25	NP-5

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Gravier-----	0-3	very gravelly sandy loam	GM	A-1, A-2	0	0	40-65	35-50	25-40	10-30	15-25	NP-5
	3-60	stratified extremely gravelly coarse sandy loam to very gravelly loam	GM	A-1	0	0-15	30-55	25-50	15-35	10-25	15-25	NP-5
1172: Pyrat-----	0-6	very stony sandy loam	GM	A-1, A-2	5-25	0-10	40-55	35-50	25-45	15-30	15-25	NP-5
	6-14	very gravelly sandy loam	GM	A-1	0	0	40-60	25-50	20-40	10-25	15-25	NP-5
	14-21	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	25-50	20-45	15-35	15-25	NP-5
	21-42	very gravelly sandy loam	GM	A-1	0	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	42-60	stratified extremely gravelly loamy sand to very gravelly coarse sandy loam	GP, GM, GP-GM	A-1	0	0-15	15-50	10-45	5-35	0-15	---	NP
Automal-----	0-8	very stony sandy loam	GC-GM, GM	A-1, A-2	5-25	0-5	40-60	35-55	25-40	15-30	20-30	NP-10
	8-49	very gravelly sandy loam, extremely gravelly sandy loam, very gravelly silt loam	GC-GM, GP-GM, GM, GP-GC	A-1, A-2	0-15	15-30	25-50	15-40	10-35	5-30	20-30	NP-10
	49-60	extremely gravelly loamy coarse sand, extremely gravelly coarse sandy loam	GP, GP-GM	A-1	0-10	0-5	25-35	15-25	5-15	0-10	15-25	NP-5
Automal-----	0-8	gravelly loam	GM, GC-GM, SC-SM, SM	A-2, A-4	0	0	55-80	50-75	35-60	30-50	25-35	5-10
	8-49	very gravelly sandy loam, extremely gravelly sandy loam, very gravelly silt loam	GM, GC-GM, GP-GM	A-1, A-2	0-15	15-30	25-50	15-40	10-35	5-30	20-30	NP-10
	49-60	extremely gravelly loamy coarse sand, extremely gravelly coarse sandy loam	GP, GP-GM	A-1	0-10	0-5	25-35	15-25	5-15	0-10	15-25	NP-5

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1173: Pyrat-----	0-6	gravelly loam	GM, SM	A-4	0	0	65-80	50-75	45-65	35-50	15-25	NP-5
	6-14	very gravelly sandy loam	GM	A-1	0	0	40-60	25-50	20-40	10-25	15-25	NP-5
	14-21	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	25-50	20-45	15-35	15-25	NP-5
	21-42	very gravelly sandy loam	GM	A-1	0	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	42-60	stratified extremely gravelly loamy sand to very gravelly coarse sandy loam	GM, GP-GM, GP	A-1	0	0-15	15-50	10-45	5-35	0-15	---	NP
Automal-----	0-8	gravelly silt loam	CL-ML, ML, GC-GM, GM	A-4	0-5	0-5	60-85	50-75	45-70	35-65	25-35	5-10
	8-49	very gravelly sandy loam, extremely gravelly sandy loam, very gravelly silt loam	GM, GC-GM, GP-GM	A-1, A-2	0-15	15-30	25-50	15-40	10-35	5-30	20-30	NP-10
	49-60	extremely gravelly loamy coarse sand, extremely gravelly coarse sandy loam	GP, GP-GM	A-1	0-10	0-5	25-35	15-25	5-15	0-10	15-25	NP-5
1174: Pyrat-----	0-6	gravelly sandy loam	GM, SM	A-2, A-4	0	0	55-85	50-75	35-60	25-45	15-25	NP-5
	6-14	very gravelly sandy loam	GM	A-1	0	0	40-60	25-50	20-40	10-25	15-25	NP-5
	14-21	very gravelly loam, very gravelly sandy loam	GM	A-1, A-2	0	0	40-60	25-50	20-45	15-35	15-25	NP-5
	21-42	very gravelly sandy loam	GM	A-1	0	0-10	35-55	25-50	20-40	10-25	15-25	NP-5
	42-60	stratified extremely gravelly loamy sand to very gravelly coarse sandy loam	GM, GP, GP-GM	A-1	0	0-15	15-50	10-45	5-35	0-15	---	NP
Tosser-----	0-10	very gravelly sandy loam	GC-GM, GM	A-1, A-2	0	0	35-55	30-50	15-35	10-20	15-25	NP-10
	10-16	very gravelly loamy sand	GM, GP-GM	A-1	0	0	35-55	30-50	15-30	5-15	0-0	NP
	16-26	extremely gravelly sand, extremely gravelly loamy sand	GP	A-1	0	0	20-30	15-25	5-15	0-5	0-0	NP
	26-60	very gravelly loamy sand	GM	A-1	0	0	35-55	30-50	15-35	10-20	0-0	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

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TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1201: Hardol-----	0-13	very gravelly silt loam	GM	A-1, A-2	0-10	10-25	40-55	35-50	25-45	20-35	25-35	NP-5
	13-37	extremely gravelly silt loam	GM	A-1	0-10	15-40	20-40	10-30	10-25	10-20	25-35	NP-5
	37-60	extremely gravelly loam	GM, GP-GM	A-1, A-2	0-10	15-40	20-40	10-30	10-25	5-20	25-35	NP-10
Rock Outcrop----	---	---	---	---	---	---	---	---	---	---	---	---
Wardbay-----	0-14	very gravelly loam	GC-GM, GM	A-2	0	0-15	35-60	25-50	20-40	15-35	25-35	5-10
	14-55	extremely cobbly silt loam, extremely gravelly silt loam	GC-GM, GM	A-2	0-5	40-55	20-50	10-40	10-35	10-30	25-35	5-10
	55-59	unweathered bedrock			---	---	---	---	---	---	---	---
1210: Blimo-----	0-8	gravelly loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-65	30-50	20-25	NP-5
	8-21	gravelly sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-60	25-45	20-25	NP-5
	21-36	gravelly sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-60	30-45	20-25	NP-5
	36-60	sandy loam	SM	A-4	0	0	80-100	75-95	60-70	35-50	20-25	NP-5
Kunzler-----	0-5	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
	5-48	fine sandy loam, sandy loam	SC-SM, SM	A-2, A-4	0	0	90-100	85-100	45-80	25-50	20-30	NP-10
	48-60	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
Lincoyer-----	0-9	silt loam	CL-ML, ML	A-4	0	0	100	100	85-100	70-90	15-25	NP-10
	9-60	very fine sandy loam, silt loam	CL-ML, ML	A-4	0	0	100	100	95-100	80-95	15-25	NP-10
1213: Blimo-----	0-8	sandy loam	SM	A-4	0	0	90-100	85-100	60-75	40-50	20-25	NP-5
	8-21	gravelly sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-60	25-45	20-25	NP-5
	21-36	gravelly sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-60	30-45	20-25	NP-5
	36-60	sandy loam	SM	A-4	0	0	80-100	75-95	60-70	35-50	20-25	NP-5
Threesee-----	0-3	gravelly loam	GC-GM, SC-SM	A-4	0	0	65-80	60-75	50-60	35-50	20-30	5-10
	3-14	gravelly loam, gravelly sandy loam	GC-GM, SC-SM	A-4	0	0	65-80	60-75	40-60	35-50	15-25	5-10
	14-46	very gravelly loamy sand	GM	A-1	0	0	45-60	30-50	20-35	10-25	---	NP
	46-60	stratified very gravelly coarse sand	SM, SP-SM	A-1	0	0	55-70	45-60	15-25	5-15	---	NP
1215: Blimo-----	0-8	sandy loam	SM	A-4	0	0	90-100	85-100	60-75	40-50	20-25	NP-5
	8-21	gravelly sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-60	25-45	20-25	NP-5
	21-36	gravelly sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-60	30-45	20-25	NP-5
	36-60	sandy loam	SM	A-4	0	0	80-100	75-95	60-70	35-50	20-25	NP-5
Zoravista-----	0-6	loamy fine sand	SM	A-2	0	0	100	100	75-90	10-35	---	NP
	6-60	fine sand, sand	SM, SP-SM	A-2, A-3	0	0	100	100	65-80	5-30	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

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TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

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TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1270: Katelana-----	0-5	silt loam	CL-ML	A-4	0	0	100	100	65-85	60-80	20-30	5-10
	5-28	silt loam	CL	A-6	0	0	100	100	70-90	65-85	25-35	10-15
	28-32	stratified silt loam to silty clay loam	CL	A-6	0	0	100	100	95-100	75-85	25-40	10-20
	32-60	stratified clay loam to silty clay loam	CL	A-7	0	0	100	100	95-100	85-95	40-50	15-25
Sheffit-----	0-4	silt loam	CL-ML, ML	A-4	0	0	100	95-100	80-100	65-85	25-35	5-10
	4-60	stratified silt loam to clay	CL, ML, MH	A-7	0	0	100	95-100	90-100	85-95	40-60	15-25
1271: Uvada-----	0-5	silty clay loam	MH, ML	A-7	0	0	100	100	90-100	80-90	45-55	15-25
	5-8	silty clay	MH	A-7	0	0	100	100	90-100	85-95	55-75	20-35
	8-17	silty clay	MH	A-7	0	0	100	100	90-100	85-95	55-75	20-35
	17-52	stratified silty clay loam to silty clay	MH	A-7	0	0	100	100	90-100	80-95	50-65	15-30
	52-60	stratified silty clay loam to silty clay	MH	A-7	0	0	100	100	90-100	80-95	50-65	15-30
Ragtown-----	0-16	silty clay loam	CL	A-6, A-7	0	0	100	100	90-100	80-95	35-45	20-30
	16-60	stratified silty clay loam to clay	CH, CL	A-7	0	0	100	100	90-100	75-95	45-65	30-50
1272: Katelana-----	0-5	silt loam	CL-ML	A-4	0	0	100	100	65-85	60-80	20-30	5-10
	5-28	silt loam	CL	A-6	0	0	100	100	70-90	65-85	25-35	10-15
	28-32	stratified silt loam to silty clay loam	CL	A-6	0	0	100	100	95-100	75-85	25-40	10-20
	32-60	stratified clay loam to silty clay loam	CL	A-7	0	0	100	100	95-100	85-95	40-50	15-25
Kawich-----	0-2	fine sand	SM	A-2	0	0	100	100	75-90	20-30	---	NP
	2-60	fine sand	SM	A-2	0	0	100	100	75-90	20-30	---	NP
1280: Sycomat-----	0-4	silt loam	CL-ML	A-4	0	0	85-100	80-100	60-90	50-80	20-25	5-10
	4-15	sandy loam	ML, SM	A-4	0	0	85-100	80-100	55-75	40-60	15-25	NP-5
	15-44	sandy loam	ML, SM	A-4	0	0	85-100	80-100	55-75	40-60	15-25	NP-5
	44-60	stratified sand to sandy loam	SM	A-2, A-4	0	0	90-100	85-100	40-65	30-50	---	NP
Kunzler-----	0-16	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
	16-48	fine sandy loam, sandy loam	SC-SM, SM	A-2, A-4	0	0	90-100	85-100	45-80	25-50	20-30	NP-10
	48-60	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
1281: Sycomat-----	0-4	silt loam	CL-ML	A-4	0	0	85-100	80-100	60-90	50-80	20-25	5-10
	4-15	sandy loam	ML, SM	A-4	0	0	85-100	80-100	55-75	40-60	15-25	NP-5
	15-44	sandy loam	ML, SM	A-4	0	0	85-100	80-100	55-75	40-60	15-25	NP-5
	44-60	stratified sand to sandy loam	SM	A-2, A-4	0	0	90-100	85-100	40-65	30-50	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Mazuma-----	0-15	silt loam	ML	A-4	0	0	95-100	85-100	70-90	50-65	20-25	NP-5
	15-60	stratified gravelly coarse sand to silt loam	SM	A-4	0	0	95-100	80-100	70-90	35-50	20-25	NP-5
1290: Heist-----	0-4	fine sandy loam	SM	A-2, A-4	0	0	85-100	75-100	60-80	25-50	15-25	NP-5
	4-40	fine sandy loam, sandy loam	SM	A-2, A-4	0	0	80-100	75-100	50-80	25-50	15-25	NP-5
	40-60	gravelly fine sandy loam, gravelly sandy loam	GM, SM	A-1, A-2, A-4	0	0	55-80	50-75	35-60	15-40	15-25	NP-5
Blimo-----	0-8	gravelly loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-65	30-50	20-25	NP-5
	8-21	gravelly sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-60	25-45	20-25	NP-5
	21-36	gravelly sandy loam	GM, SM	A-2, A-4	0	0	60-85	50-75	40-60	30-45	20-25	NP-5
	36-60	sandy loam	SM	A-4	0	0	80-100	75-95	60-70	35-50	20-25	NP-5
1300: Cavehill-----	0-12	very stony silt loam	GC-GM, GM	A-2, A-4	5-25	15-35	40-65	35-60	30-55	25-40	25-35	5-10
	12-30	very stony loam, very cobble loam, very gravelly loam	GC-GM, GM	A-2, A-4	0-25	5-40	35-70	30-65	25-50	20-40	25-35	5-10
	30-34	unweathered bedrock			---	---	---	---	---	---	---	---
Haunchee-----	0-4	very gravelly loam	GC-GM	A-2	0	0-10	35-60	25-50	20-35	15-30	20-30	5-10
	4-11	very gravelly loam, very gravelly very fine sandy loam	GC-GM	A-2	0	0-30	35-60	25-50	20-35	15-30	20-30	5-10
	11-15	unweathered bedrock			---	---	---	---	---	---	---	---
Hardzem-----	0-5	channery loam	SC-SM	A-4	0	0-25	70-80	65-75	50-70	35-50	20-30	5-10
	5-28	very channery loam, extremely channery loam, extremely channery clay loam	GC	A-2	0-5	10-25	20-50	15-45	10-40	10-35	30-40	10-15
	28-55	weathered bedrock			---	---	---	---	---	---	---	---
1360: Toba-----	0-4	loam	CL	A-6	0	0	100	100	70-85	50-70	30-35	10-15
	4-14	clay loam	CL	A-6	0	0	100	100	75-90	60-70	35-40	15-20
	14-23	loamy fine sand	SM	A-2	0	0	90-100	85-100	75-90	20-35	---	NP
	23-60	fine sand, sand	SP-SM	A-3	0	0	90-100	85-100	75-90	5-10	---	NP
Appian-----	0-3	loam	CL-ML	A-4	0	0	95-100	90-100	75-95	55-70	20-30	5-10
	3-19	clay loam, sandy clay loam	CL, SC	A-6, A-7	0	0	95-100	90-100	75-90	40-60	35-45	15-20
	19-27	stratified sand to sandy loam	SM	A-2	0	0	75-100	75-90	50-65	10-25	---	NP
	27-60	sand, coarse sand	SP, SP-SM	A-1	0	0	85-100	75-90	30-50	0-10	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1370: Orupa-----	0-6	silty clay loam	CL	A-7	0	0	100	100	80-100	80-100	40-50	20-30
	6-60	clay loam, silty clay, clay	CH, CL	A-7	0	0	100	100	80-100	80-90	40-55	20-30
Playas-----	0-6	silty clay loam	CH, CL, ML, MH	A-7	0	0	100	100	100	90-100	40-55	15-25
	6-60	silty clay loam, clay, silty clay	CH, MH, CL	A-7	0	0	100	100	100	90-100	45-75	20-40
Boofuss-----	0-10	silty clay	CH, CL	A-7	0	0	100	100	90-100	85-95	45-60	25-35
	10-27	stratified silty clay loam to clay	CH, CL	A-7	0	0	100	100	70-95	65-90	40-60	20-35
	27-60	stratified fine sandy loam to silt loam	ML, SM	A-2, A-4	0	0	95-100	90-100	65-85	30-60	15-25	NP-5
1380: Hulderman-----	0-5	fine sandy loam	SC-SM	A-4	0	0	100	100	80-90	40-50	20-25	5-10
	5-18	loam	CL	A-6	0	0	100	100	70-80	60-70	30-35	10-15
	18-27	loamy sand	SM	A-4	0	0	100	100	50-60	35-50	---	NP
	27-60	sand, fine sand	SP	A-1	0	0	85-95	80-90	30-50	0-5	---	NP
Toba-----	0-4	loam	CL	A-6	0	0	100	100	70-85	50-70	30-35	10-15
	4-14	clay loam	CL	A-6	0	0	100	100	75-90	60-70	35-40	15-20
	14-23	loamy fine sand	SM	A-2	0	0	90-100	85-100	75-90	20-35	---	NP
	23-60	fine sand, sand	SP-SM	A-3	0	0	90-100	85-100	75-90	5-10	---	NP
Benin-----	0-7	silty clay loam	CL, ML	A-7	0	0	100	100	95-100	85-95	40-50	15-20
	7-60	clay, silty clay	CH, CL, MH	A-7	0	0	100	100	90-100	85-95	45-55	20-25
1390: Wendane-----	0-8	silt loam	ML	A-4	0	0	100	100	90-100	70-85	30-40	NP-10
	8-42	silt loam, very fine sandy loam	ML	A-4	0	0	100	100	95-100	70-80	30-40	NP-10
	42-60	stratified silt loam to clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-95	35-45	10-20
Mysol-----	0-5	silty clay loam	CL	A-6, A-7	0	0	100	100	85-95	80-90	35-45	15-20
	5-17	silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	75-95	60-75	30-45	10-20
	17-31	silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	75-95	60-75	30-45	10-20
	31-60	stratified very gravelly coarse sand to fine sandy loam	SM	A-4	0	0-10	75-100	70-100	60-70	35-50	---	NP
Toba-----	0-4	loam	CL	A-6	0	0	100	100	70-85	50-70	30-35	10-15
	4-14	clay loam	CL	A-6	0	0	100	100	75-90	60-70	35-40	15-20
	14-23	loamy fine sand	SM	A-2	0	0	90-100	85-100	75-90	20-35	---	NP
	23-60	fine sand, sand	SP-SM	A-3	0	0	90-100	85-100	75-90	5-10	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1410: Threese-----	0-3	gravelly loam	GC-GM, SC-SM	A-4	0	0	65-80	60-75	50-60	35-50	20-30	5-10
	3-14	gravelly loam, gravelly sandy loam	GC-GM, SC-SM	A-4	0	0	65-80	60-75	40-60	35-50	15-25	5-10
	14-46	very gravelly loamy sand	GM	A-1	0	0	45-60	30-50	20-35	10-25	---	NP
	46-60	stratified very gravelly coarse sand	SM, SP-SM	A-1	0	0	55-70	45-60	15-25	5-15	---	NP
Tosser-----	0-5	very gravelly sandy loam	GC-GM, GM	A-1, A-2	0	0	35-55	30-50	15-35	10-20	15-25	NP-10
	5-16	very gravelly loamy sand	GM, GP-GM	A-1	0	0	35-55	30-50	15-30	5-15	0-0	NP
	16-26	extremely gravelly sand, extremely gravelly loamy sand	GP	A-1	0	0	20-30	15-25	5-15	0-5	0-0	NP
	26-60	very gravelly loamy sand	GM	A-1	0	0	35-55	30-50	15-35	10-20	0-0	NP
1411: Threese-----	0-3	very gravelly sandy loam	GC-GM	A-2	0	0	30-55	25-50	20-40	10-20	20-25	5-10
	3-14	gravelly loam	GC-GM, SC-SM	A-2, A-4	0	0	55-80	50-75	40-60	30-50	20-30	5-10
	14-46	very gravelly loamy sand	GM	A-1	0	0	45-60	30-50	20-35	10-25	---	NP
	46-60	stratified very gravelly coarse sand	SM, SP-SM	A-1	0	0	55-70	45-60	15-25	5-15	---	NP
Linoyer-----	0-9	gravelly fine sandy loam	SM	A-4	0	0	65-75	60-75	50-70	35-50	15-25	NP-10
	9-60	very fine sandy loam, silt loam	CL-ML, ML	A-4	0	0	100	100	95-100	80-95	15-30	NP-10
Okan-----	0-8	sandy loam	SM	A-2	0	0	90-95	85-95	50-60	25-35	15-25	NP-5
	8-38	sandy loam	SM	A-2	0	0-10	90-95	85-95	50-60	25-35	15-25	NP-5
	38-60	stratified extremely gravelly loamy sand	GM, GP-GM	A-1	0	0-15	30-45	25-40	10-30	5-15	---	NP
1412: Threese-----	0-3	very gravelly sandy loam	GC-GM	A-2	0	0	30-55	25-50	20-40	10-20	20-25	5-10
	3-14	gravelly loam	GC-GM, SC-SM	A-2, A-4	0	0	55-80	50-75	40-60	30-50	20-30	5-10
	14-46	very gravelly loamy sand	GM	A-1	0	0	45-60	30-50	20-35	10-25	---	NP
	46-60	stratified very gravelly coarse sand	SM, SP-SM	A-1	0	0	55-70	45-60	15-25	5-15	---	NP
Idway-----	0-4	loamy sand	SM, SP-SM	A-1, A-2	0	0	85-100	75-100	15-40	5-30	---	NP
	4-12	sandy loam	SM	A-2, A-4	0	0	90-100	85-100	45-75	25-50	15-25	NP-5
	12-27	loam	ML	A-4	0	0	95-100	90-100	50-80	50-70	15-25	NP-5
	27-50	stratified extremely gravelly coarse sand to fine sand	GP-GM, SM, GM, SP-SM	A-1	0	0	50-80	35-70	15-45	5-25	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

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TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Tecomar-----	0-2	extremely gravelly loam	GC	A-2	0	5-30	20-35	15-30	10-25	10-20	25-35	10-15
	2-14	extremely cobbly silt loam, very cobbly silt loam	GC	A-2, A-6	0-15	45-60	35-55	20-45	15-40	10-40	25-35	10-15
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
Rock Outcrop----	---	---	---	---	---	---	---	---	---	---	---	---
1440: Boofuss-----	0-10	silty clay	CH, CL	A-7	0	0	100	100	90-100	85-95	45-60	25-35
	10-27	stratified silty clay loam to clay	CH, CL	A-7	0	0	100	100	70-95	65-90	40-60	20-35
	27-60	stratified fine sandy loam to silt loam	ML, SM	A-2, A-4	0	0	95-100	90-100	65-85	30-60	15-25	NP-5
Boofuss-----	0-10	silty clay	CH, CL	A-7	0	0	100	100	90-100	85-95	45-60	25-35
	10-27	stratified silty clay loam to clay	CH, CL	A-7	0	0	100	100	70-95	65-90	40-60	20-35
	27-60	stratified fine sandy loam to silt loam	ML, SM	A-2, A-4	0	0	95-100	90-100	65-85	30-60	15-25	NP-5
Equis-----	0-6	silty clay	MH	A-7	0	0	100	100	95-100	95-100	60-80	20-30
	6-24	silty clay, clay	MH	A-7	0	0	100	100	95-100	95-100	60-80	20-30
	24-41	silty clay, silty clay loam	MH	A-7	0	0	100	100	95-100	95-100	50-70	15-25
	41-60	silty clay loam, silty clay, silt loam	MH, ML	A-6, A-7	0	0	100	95-100	90-100	85-95	35-70	10-25
1441: Boofuss-----	0-10	silty clay	CH, CL	A-7	0	0	100	100	90-100	85-95	45-60	25-35
	10-27	stratified silty clay loam to clay	CH, CL	A-7	0	0	100	100	70-95	65-90	40-60	20-35
	27-60	stratified fine sandy loam to silt loam	ML, SM	A-2, A-4	0	0	95-100	90-100	65-85	30-60	15-25	NP-5
Wendane-----	0-8	silt loam	ML	A-4	0	0	100	100	90-100	70-85	30-40	NP-10
	8-42	silt loam, very fine sandy loam	ML	A-4	0	0	100	100	95-100	70-80	30-40	NP-10
	42-60	stratified silt loam to clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-95	35-45	10-20
Umberland-----	0-15	silty clay	CL, MH, CH, ML	A-7	0	0	100	100	95-100	85-95	45-55	20-25
	15-60	silty clay, silty clay loam, clay	CH, CL	A-7	0	0	100	100	95-100	85-95	40-55	20-30

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct						
	In											
1450: Piltown-----	0-10	fine sandy loam	SM	A-4	0	0	95-100	95-100	70-80	35-50	20-25	NP-5
	10-60	fine sandy loam, sandy loam, very fine sandy loam	SM	A-2, A-4	0	0	75-100	75-100	50-90	30-50	20-25	NP-5
Kawich-----	0-2	fine sand	SM	A-2	0	0	100	100	75-90	20-30	---	NP
	2-60	fine sand	SM	A-2	0	0	100	100	75-90	20-30	---	NP
1460: Tosser-----	0-10	very gravelly sandy loam	GC-GM, GM	A-1, A-2	0	0	35-55	30-50	15-35	10-20	15-25	NP-10
	10-16	very gravelly loamy sand	GM, GP-GM	A-1	0	0	35-55	30-50	15-30	5-15	0-0	NP
	16-26	extremely gravelly sand, extremely gravelly loamy sand	GP	A-1	0	0	20-30	15-25	5-15	0-5	0-0	NP
	26-60	very gravelly loamy sand	GM	A-1	0	0	35-55	30-50	15-35	10-20	0-0	NP
Threesee-----	0-3	gravelly loam	GC-GM, SC-SM	A-4	0	0	65-80	60-75	50-60	35-50	20-30	5-10
	3-14	gravelly loam, gravelly sandy loam	GC-GM, SC-SM	A-4	0	0	65-80	60-75	40-60	35-50	15-25	5-10
	14-46	very gravelly loamy sand	GM	A-1	0	0	45-60	30-50	20-35	10-25	---	NP
	46-60	stratified very gravelly coarse sand	SM, SP-SM	A-1	0	0	55-70	45-60	15-25	5-15	---	NP
1471: Timpie-----	0-8	silt loam	CL-ML	A-4	0	0	100	100	95-100	65-95	25-30	5-10
	8-19	silt loam	CL-ML	A-4	0	0	100	100	95-100	80-95	25-30	5-10
	19-60	silt loam	CL-ML	A-4	0	0	100	100	95-100	80-95	25-30	5-10
Kunzler-----	0-5	silt loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
	5-48	fine sandy loam, sandy loam	SC-SM, SM	A-2, A-4	0	0	90-100	85-100	45-80	25-50	20-30	NP-10
	48-60	loam	CL-ML, ML	A-4	0	0	90-100	85-100	65-95	50-75	20-30	NP-10
Threesee-----	0-3	very gravelly sandy loam	GC-GM	A-2	0	0	30-55	25-50	20-40	10-20	20-25	5-10
	3-14	gravelly loam	GC-GM, SC-SM	A-2, A-4	0	0	55-80	50-75	40-60	30-50	20-30	5-10
	14-46	very gravelly loamy sand	GM	A-1	0	0	45-60	30-50	20-35	10-25	---	NP
	46-60	stratified very gravelly coarse sand	SM, SP-SM	A-1	0	0	55-70	45-60	15-25	5-15	---	NP
1480: Tulase-----	0-2	silt loam	CL-ML, ML	A-4	0	0	100	100	100	90-100	15-25	NP-10
	2-60	very fine sandy loam, silt loam	CL-ML, ML	A-4	0	0	95-100	90-100	85-100	70-85	15-25	NP-10
Linoyer-----	0-9	silt loam	CL-ML, ML	A-4	0	0	100	100	85-100	70-90	15-25	NP-10
	9-60	very fine sandy loam, silt loam	CL-ML, ML	A-4	0	0	100	100	95-100	80-95	15-25	NP-10

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1500: Tooele-----	0-5	sandy loam	SM	A-2	0	0	90-100	85-100	50-70	15-35	15-25	NP-5
	5-44	fine sandy loam	SM	A-2	0	0	90-100	85-100	60-80	15-35	15-25	NP-5
	44-61	stratified sandy loam to silt loam	ML, SM	A-4	0	0	90-100	85-100	45-75	35-60	15-25	NP-5
Loray-----	0-12	gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	60-80	55-75	45-60	20-30	20-25	NP-5
	12-60	stratified extremely gravelly coarse sand to extremely gravelly loamy fine sand	GP, GP-GM	A-1	0	0-15	20-35	10-25	5-20	0-10	---	NP
1510: Izamat-----	0-3	gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	55-80	50-75	30-50	15-30	15-25	NP-5
	3-13	gravelly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	40-80	35-75	25-50	20-35	15-25	NP-5
	13-22	very gravelly loamy sand, very gravelly sand, very gravelly loamy coarse sand	GM, GP-GM	A-1	0	0-5	30-55	25-50	15-30	5-15	---	NP
	22-60	stratified extremely gravelly coarse sand to very gravelly loamy sand	GM, GP, SP- SM, GP-GM	A-1	0	0-5	20-60	15-55	5-35	0-15	---	NP
Cliffdown-----	0-6	very gravelly sandy loam	GC-GM, GM	A-1, A-2	0	0-5	35-55	30-50	15-35	10-20	15-25	NP-10
	6-60	very gravelly sandy loam	GC-GM, GM	A-1, A-2	0	0-5	35-55	30-50	15-35	10-20	15-25	NP-10
1520: Izamat-----	0-3	gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	55-80	50-75	30-50	15-30	15-25	NP-5
	3-13	gravelly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	40-80	35-75	25-50	20-35	15-25	NP-5
	13-22	very gravelly loamy sand, very gravelly sand, very gravelly loamy coarse sand	GM, GP-GM	A-1	0	0-5	30-55	25-50	15-30	5-15	---	NP
	22-60	stratified extremely gravelly coarse sand to very gravelly loamy sand	GP, GP-GM, GM, SP-SM	A-1	0	0-5	20-60	15-55	5-35	0-15	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct						
Izamatch-----	In											
	0-3	gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	55-80	50-75	30-50	15-30	15-25	NP-5
	3-13	gravelly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	40-80	35-75	25-50	20-35	15-25	NP-5
	13-22	very gravelly loamy sand, very gravelly sand, very gravelly loamy coarse sand	GM, GP-GM	A-1	0	0-5	30-55	25-50	15-30	5-15	---	NP
	22-60	stratified extremely gravelly coarse sand to very gravelly loamy sand	GM, SP-SM, GP, GP-GM	A-1	0	0-5	20-60	15-55	5-35	0-15	---	NP
	0-3	loamy sand	SM	A-2	0	0	100	90-100	70-85	20-35	---	NP
	3-60	stratified very gravelly coarse sand to sandy loam	SM	A-1, A-2	0-10	0	75-95	55-90	45-80	10-30	---	NP
1521: Izamatch-----	0-3	gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	55-80	50-75	30-50	15-30	15-25	NP-5
	3-13	gravelly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	40-80	35-75	25-50	20-35	15-25	NP-5
	13-22	very gravelly loamy sand, very gravelly sand, very gravelly loamy coarse sand	GM, GP-GM	A-1	0	0-5	30-55	25-50	15-30	5-15	---	NP
	22-60	stratified extremely gravelly coarse sand to very gravelly loamy sand	GP, GM, GP-GM, SP-SM	A-1	0	0-5	20-60	15-55	5-35	0-15	---	NP
Izamatch-----	0-3	gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	55-80	50-75	30-50	15-30	15-25	NP-5
	3-13	gravelly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	40-80	35-75	25-50	20-35	15-25	NP-5
	13-22	very gravelly loamy sand, very gravelly sand, very gravelly loamy coarse sand	GM, GP-GM	A-1	0	0-5	30-55	25-50	15-30	5-15	---	NP
	22-60	stratified extremely gravelly coarse sand to very gravelly loamy sand	GP, GP-GM, GM, SP-SM	A-1	0	0-5	20-60	15-55	5-35	0-15	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Antoft-----	0-2	very gravelly loam	GC, GC-GM	A-2	0	0	30-55	25-50	20-45	15-35	25-35	5-15
	2-12	very gravelly loam, extremely gravelly loam	GC, GC-GM	A-2	0	0	25-55	20-50	15-45	10-35	20-35	5-15
	12-16	unweathered bedrock			---	---	---	---	---	---	---	---
Jericho-----	0-4	very gravelly loam	GC-GM	A-2	0	0	45-60	35-50	25-40	20-35	25-30	5-10
	4-14	very gravelly sandy loam	GM	A-1	0	0-10	40-60	30-50	20-40	10-25	20-25	NP-5
	14-28	indurated			---	---	---	---	---	---	---	---
	28-60	extremely gravelly loamy coarse sand	GP-GM	A-1	0	0	25-35	15-25	10-20	5-10	0-14	NP
1550: Jericho-----	0-4	very gravelly loam	GC-GM	A-2	0	0	45-60	35-50	25-40	20-35	25-30	5-10
	4-14	very gravelly sandy loam	GM	A-1	0	0-10	40-60	30-50	20-40	10-25	20-25	NP-5
	14-28	indurated			---	---	---	---	---	---	---	---
	28-60	extremely gravelly loamy coarse sand	GP-GM	A-1	0	0	25-35	15-25	10-20	5-10	0-14	NP
Jericho-----	0-4	very gravelly loam	GC-GM	A-2	0	0	45-60	35-50	25-40	20-35	25-30	5-10
	4-14	very gravelly sandy loam	GM	A-1	0	0-10	40-60	30-50	20-40	10-25	20-25	NP-5
	14-28	indurated			---	---	---	---	---	---	---	---
	28-60	extremely gravelly loamy coarse sand	GP-GM	A-1	0	0	25-35	15-25	10-20	5-10	0-14	NP
1560: Toano-----	0-9	very fine sandy loam	ML	A-4, A-5	0	0	100	95-100	85-100	60-80	30-50	NP-5
	9-27	silt loam, very fine sandy loam	ML	A-4, A-5	0	0	100	95-100	95-100	70-95	30-50	NP-5
	27-60	silt loam, very fine sandy loam	ML	A-4, A-5	0	0	100	95-100	95-100	70-95	30-50	NP-5
Timpie-----	0-8	very fine sandy loam	ML	A-4	0	0	100	100	95-100	60-80	15-25	NP-5
	8-19	silt loam	CL-ML	A-4	0	0	100	100	95-100	80-95	25-30	5-10
	19-60	silt loam	CL-ML	A-4	0	0	100	100	95-100	80-95	25-30	5-10
1570: Jericho-----	0-4	very gravelly loam	GC-GM	A-2	0	0	45-60	35-50	25-40	20-35	25-30	5-10
	4-14	very gravelly sandy loam	GM	A-1	0	0-10	40-60	30-50	20-40	10-25	20-25	NP-5
	14-28	indurated			---	---	---	---	---	---	---	---
	28-60	extremely gravelly loamy coarse sand	GP-GM	A-1	0	0	25-35	15-25	10-20	5-10	0-14	NP
Xeric Torriorthents--	0-5	gravelly sandy loam	GM, SM	A-1, A-2	0	0	55-80	50-75	30-50	15-30	15-25	NP-5
	5-60	stratified very gravelly coarse sand to extremely gravelly coarse sand	GP, GM, GP-GM	A-1	0	0-10	15-50	10-45	5-25	0-15	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	#	10	40	200		
	In				Pct	Pct					Pct	
1580: Armespan-----	0-7	very gravelly sandy loam	GM	A-1	0	0-10	45-60	30-50	20-40	10-25	20-25	NP-5
	7-21	gravelly sandy loam, gravelly loam	GM, SM	A-2, A-4	0	0-10	55-85	50-75	35-60	25-45	20-25	NP-5
	21-32	very gravelly sandy loam, very gravelly coarse sandy loam	GM	A-1	0	0-10	40-60	35-50	20-40	10-25	20-25	NP-5
	32-60	very gravelly loamy coarse sand, very gravelly loamy sand	GP-GM, SM, GM, SP-SM	A-1	0	0-10	30-60	25-50	10-35	5-15	---	NP
Jericho-----	0-4	very gravelly loam	GC-GM	A-2	0	0	45-60	35-50	25-40	20-35	25-30	5-10
	4-14	very gravelly sandy loam	GM	A-1	0	0-10	40-60	30-50	20-40	10-25	20-25	NP-5
	14-28	indurated			---	---	---	---	---	---	---	---
	28-60	extremely gravelly loamy coarse sand	GP-GM	A-1	0	0	25-35	15-25	10-20	5-10	0-14	NP
1581: Armespan-----	0-7	very gravelly sandy loam	GM	A-1	0	0-10	45-60	30-50	20-40	10-25	20-25	NP-5
	7-21	gravelly sandy loam, gravelly loam	GM, SM	A-2, A-4	0	0-10	55-85	50-75	35-60	25-45	20-25	NP-5
	21-32	very gravelly sandy loam, very gravelly coarse sandy loam	GM	A-1	0	0-10	40-60	35-50	20-40	10-25	20-25	NP-5
	32-60	very gravelly loamy coarse sand, very gravelly loamy sand	GP-GM, SM, GM, SP-SM	A-1	0	0-10	30-60	25-50	10-35	5-15	---	NP
Kyler-----	0-3	very gravelly loam	GC-GM, GM	A-1, A-2	0	0	30-55	25-50	20-40	15-30	15-25	NP-10
	3-7	very gravelly loam	GC-GM, GM	A-1, A-2, A-4	0	15-25	40-65	35-60	30-50	20-40	15-25	NP-10
	7-11	unweathered bedrock			---	---	---	---	---	---	---	---
Heist-----	0-4	fine sandy loam	SM	A-2, A-4	0	0	85-100	75-100	60-80	25-50	15-25	NP-5
	4-40	fine sandy loam, sandy loam	SM	A-2, A-4	0	0	80-100	75-100	50-80	25-50	15-25	NP-5
	40-60	gravelly fine sandy loam, gravelly sandy loam	GM, SM	A-1, A-2, A-4	0	0	55-80	50-75	35-60	15-40	15-25	NP-5

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1582: Armespan-----	0-7	very gravelly sandy loam	GM	A-1	0	0-10	45-60	30-50	20-40	10-25	20-25	NP-5
	7-21	gravelly sandy loam, gravelly loam	GM, SM	A-2, A-4	0	0-10	55-85	50-75	35-60	25-45	20-25	NP-5
	21-32	very gravelly sandy loam, very gravelly coarse sandy loam	GM	A-1	0	0-10	40-60	35-50	20-40	10-25	20-25	NP-5
	32-60	very gravelly loamy coarse sand, very gravelly loamy sand	GM, GP-GM, SP-SM, SM	A-1	0	0-10	30-60	25-50	10-35	5-15	---	NP
Xeric Torriorthents--	0-5	gravelly sandy loam	GM, SM	A-1, A-2	0	0	55-80	50-75	30-50	15-30	15-25	NP-5
	5-60	stratified very gravelly extremely gravelly coarse sand	GM, GP, GP-GM	A-1	0	0-10	15-50	10-45	5-25	0-15	---	NP
1590: Luning-----	0-3	gravelly sandy loam	GM, SM	A-1, A-2	0-5	0-5	55-80	50-75	40-50	20-35	15-25	NP-5
	3-60	stratified very gravelly coarse sand to sandy loam	SM	A-1, A-2	0-10	0	75-95	55-90	45-80	10-30	---	NP
Luning-----	0-3	gravelly loamy sand	GM, SM	A-1, A-2	0-5	0-5	55-80	50-75	40-50	20-35	---	NP
	3-60	stratified very gravelly coarse sand to sandy loam	SM	A-1, A-2	0-10	0	75-95	55-90	45-80	10-30	---	NP
Loray-----	0-12	gravelly loam	GC-GM, GM, SM, SC-SM	A-2, A-4	0	0	55-80	50-75	40-70	30-50	20-30	NP-10
	12-60	stratified extremely gravelly coarse sand to extremely gravelly loamy fine sand	GP, GP-GM	A-1	0	0-15	20-35	10-25	5-20	0-10	---	NP
1591: Luning-----	0-3	sandy loam	SM	A-2, A-4	0	0	95-100	90-100	65-80	30-40	15-25	NP-5
	3-60	stratified very gravelly coarse sand to sandy loam	SM	A-1, A-2	0-10	0	75-95	55-90	45-80	10-30	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Izamatc-----	0-3	very gravelly sandy loam	GM, GP-GM	A-1	0	0-5	30-55	25-50	15-35	5-20	15-25	NP-5
	3-13	gravelly sandy loam, very gravelly sandy loam	GM, SM	A-1, A-2	0	0-5	40-80	35-75	25-50	20-35	15-25	NP-5
	13-22	very gravelly loamy sand, very gravelly sand, very gravelly loamy coarse sand	GM, GP-GM	A-1	0	0-5	30-55	25-50	15-30	5-15	---	NP
	22-60	stratified extremely gravelly coarse sand to very gravelly loamy sand	GP, GM, GP- GM, SP-SM	A-1	0	0-5	20-60	15-55	5-35	0-15	---	NP
Badland-----	0-6	variable	CH, CL, ML, MR	A-7	0	0	100	100	100	90-100	45-75	20-35
	6-60	silty clay loam, clay, silty clay	CL, CH, MH, ML	A-7	0	0	100	100	100	90-100	45-75	20-35
1600: Eaglepass-----	0-1	very gravelly sandy loam	GM, GP-GM	A-1	0	0-5	35-55	25-45	15-35	5-25	15-25	NP-5
	1-5	extremely gravelly sandy loam	GM, GP-GM	A-1	0	0-5	30-40	20-25	10-20	5-15	15-25	NP-5
	5-9	unweathered bedrock			---	---	---	---	---	---	---	---
Amtoft-----	0-4	very gravelly loam	GC, GC-GM	A-2	0	0	30-55	25-50	20-45	15-35	25-35	5-15
	4-15	very gravelly loam, extremely gravelly loam	GC, GC-GM	A-2	0	0	25-55	20-50	15-45	10-35	20-35	5-15
	15-25	unweathered bedrock			---	---	---	---	---	---	---	---
1610: Xeric Torriorthents--	0-5	gravelly sandy loam	GM, SM	A-1, A-2	0	0	55-80	50-75	30-50	15-30	15-25	NP-5
	5-60	stratified very gravelly extremely gravelly coarse sand	GM, GP, GP-GM	A-1	0	0-10	15-50	10-45	5-25	0-15	---	NP
Armespan-----	0-7	very gravelly sandy loam	GM	A-1	0	0-10	45-60	30-50	20-40	10-25	20-25	NP-5
	7-21	gravelly sandy loam, gravelly loam	GM, SM	A-2, A-4	0	0-10	55-85	50-75	35-60	25-45	20-25	NP-5
	21-32	very gravelly sandy loam, very gravelly coarse sandy loam	GM	A-1	0	0-10	40-60	35-50	20-40	10-25	20-25	NP-5
	32-60	very gravelly loamy coarse sand, very gravelly loamy sand	GM, GP-GM, SP-SM, SM	A-1	0	0-10	30-60	25-50	10-35	5-15	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
Badland-----	0-60	weathered bedrock			Pct	Pct					Pct	
					0	0	---	---	---	---	0-14	---
1620: Kolda-----	0-10	silt loam	CL-ML	A-4	0	0	100	100	80-90	60-80	20-30	5-10
	10-15	silt loam	CL	A-6	0	0	100	100	80-90	60-80	30-35	10-15
	15-36	silty clay	CL	A-7	0	0	100	100	90-100	85-95	40-45	15-20
	36-60	clay	CH, CL	A-7	0	0	100	100	90-100	85-95	45-65	20-35
Duffer-----	0-25	silt loam	CL-ML	A-4	0	0	100	100	90-100	75-90	25-30	5-10
	25-60	silt loam, silty clay loam	CL	A-6	0	0	100	100	95-100	85-95	30-40	10-20
Sonoma-----	0-6	silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	35-45	15-20
	6-48	stratified silt loam to silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	80-95	30-50	10-20
	48-60	silty clay	MH	A-7	0	0	95-100	95-100	90-100	85-95	50-60	20-25
1621: Kolda-----	0-6	silt loam	CL-ML	A-4	0	0	100	100	80-90	60-80	20-30	5-10
	6-15	silt loam	CL	A-6	0	0	100	100	80-90	60-80	30-35	10-15
	15-36	silty clay	CL	A-7	0	0	100	100	90-100	85-95	40-45	15-20
	36-60	clay	CH, CL	A-7	0	0	100	100	90-100	85-95	45-65	20-35
Rubylake-----	0-7	clay loam	CL	A-6	0	0	100	100	85-95	80-90	35-40	15-20
	7-23	silt loam	ML	A-4	0	0	100	100	95-100	85-90	30-40	5-10
	23-55	silt loam	ML	A-4	0	0	100	100	95-100	85-90	30-40	5-10
	55-60	silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	90-100	80-85	35-45	10-20
Kolda-----	0-10	silt loam	CL-ML	A-4	0	0	100	100	80-90	60-80	20-30	5-10
	10-15	silt loam	CL	A-6	0	0	100	100	80-90	60-80	30-35	10-15
	15-36	silty clay	CL	A-7	0	0	100	100	90-100	85-95	40-45	15-20
	36-60	clay	CH, CL	A-7	0	0	100	100	90-100	85-95	45-65	20-35
1622: Kolda-----	0-10	silt loam	CL-ML	A-4	0	0	100	100	80-90	60-80	20-30	5-10
	10-15	silt loam	CL	A-6	0	0	100	100	80-90	60-80	30-35	10-15
	15-36	silty clay	CL	A-7	0	0	100	100	90-100	85-95	40-45	15-20
	36-60	clay	CH, CL	A-7	0	0	100	100	90-100	85-95	45-65	20-35
1623: Kolda-----	0-10	silt loam	CL-ML	A-4	0	0	100	100	80-90	60-80	20-30	5-10
	10-15	silt loam	CL	A-6	0	0	100	100	80-90	60-80	30-35	10-15
	15-36	silty clay	CL	A-7	0	0	100	100	90-100	85-95	40-45	15-20
	36-60	clay	CH, CL	A-7	0	0	100	100	90-100	85-95	45-65	20-35
Water-----	---	---	---	---	---	---	---	---	---	---	---	---
1630: Pookaloo-----	0-2	very gravelly loam	GM	A-2	0	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	2-14	very gravelly loam, very gravelly silt loam	GM	A-2, A-4	0	0	50-60	35-50	35-45	25-40	20-25	NP-

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Rock Outcrop----	---	---	---	---	---	---	---	---	---	---	---	---
1631: Pookaloo-----	0-2	very gravelly loam	GM	A-2	0	0-5	50-60	35-50	30-40	25-35	20-25	NP-5
	2-14	very gravelly loam, very gravelly silt loam	GM	A-2, A-4	0	0	50-60	35-50	35-45	25-40	20-25	NP-5
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
Tecomar-----	0-2	extremely gravelly loam	GC	A-2	0	5-30	20-35	15-30	10-25	10-20	25-35	10-15
	2-14	extremely cobblely silt loam, very cobblely silt loam	GC	A-2, A-6	0-15	45-60	35-55	20-45	15-40	10-40	25-35	10-15
	14-18	unweathered bedrock			---	---	---	---	---	---	---	---
Wardbay-----	0-14	very gravelly loam	GC-GM, GM	A-2	0	0-15	35-60	25-50	20-40	15-35	25-35	5-10
	14-55	extremely cobblely silt loam, extremely gravelly silt loam	GC-GM, GM	A-2	0-5	40-55	20-50	10-40	10-35	10-30	25-35	5-10
	55-59	unweathered bedrock			---	---	---	---	---	---	---	---
1640: Jungo-----	0-3	very gravelly loam	GC-GM	A-2	0	0-10	40-55	35-50	25-45	20-35	25-30	5-10
	3-20	very gravelly sandy clay loam, very gravelly clay loam	GC	A-2	0-10	0-10	30-55	25-50	20-40	15-35	35-40	15-20
	20-60	extremely gravelly clay loam, extremely gravelly sandy clay loam	GC, GP-GC	A-2	0-10	10-25	15-40	10-30	10-30	5-25	35-40	15-20
Jungo-----	0-3	very gravelly loam	GC-GM	A-2	0	0-10	40-55	35-50	25-45	20-35	25-30	5-10
	3-20	very gravelly sandy clay loam, very gravelly clay loam	GC	A-2	0-10	0-10	30-55	25-50	20-40	15-35	35-40	15-20
	20-60	extremely gravelly clay loam, extremely gravelly sandy clay loam	GC, GP-GC	A-2	0-10	10-25	15-40	10-30	10-30	5-25	35-40	15-20

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct					Pct	
1650: Shantown-----	In											
	0-2	gravelly loamy sand	SM	A-1, A-2	0	0	75-90	60-75	20-45	10-35	---	NP
	2-11	coarse sandy loam, sandy loam	SM	A-1, A-4, A-2	0	0	85-100	75-90	20-50	10-40	---	NP
	11-33	coarse sandy loam, gravelly sandy loam, sandy loam	SM	A-1, A-2	0	0	75-100	55-85	30-50	15-30	15-20	NP-5
	33-49	gravelly loamy sand, gravelly sand, loamy coarse sand	SM, SP-SM	A-1, A-2	0	0	75-100	55-90	15-40	5-30	---	NP
	49-60	very gravelly coarse sand, extremely gravelly coarse sand	GP, GP-GM, GM, SP-SM	A-1	0	0	40-65	10-35	5-30	0-15	---	NP
Zorravista-----	0-6	loamy fine sand	SM	A-2	0	0	100	100	75-90	10-35	---	NP
	6-60	fine sand, sand	SM, SP-SM	A-2, A-3	0	0	100	100	65-80	5-30	---	NP
1651: Shantown-----	0-2	gravelly loamy sand	SM	A-1, A-2	0	0	75-90	60-75	20-45	10-35	---	NP
	2-11	coarse sandy loam, sandy loam	SM	A-1, A-4, A-2	0	0	85-100	75-90	20-50	10-40	---	NP
	11-33	coarse sandy loam, gravelly sandy loam, sandy loam	SM	A-1, A-2	0	0	75-100	55-85	30-50	15-30	15-20	NP-5
	33-49	gravelly loamy sand, gravelly sand, loamy coarse sand	SM, SP-SM	A-1, A-2	0	0	75-100	55-90	15-40	5-30	---	NP
	49-60	very gravelly coarse sand, extremely gravelly coarse sand	GP, GP-GM, GM, SP-SM	A-1	0	0	40-65	10-35	5-30	0-15	---	NP
Shantown-----	0-2	gravelly loamy sand	SM	A-1, A-2	0	0	75-90	60-75	20-45	10-35	---	NP
	2-11	coarse sandy loam, sandy loam	SM	A-1, A-4, A-2	0	0	85-100	75-90	20-50	10-40	---	NP
	11-33	coarse sandy loam, gravelly sandy loam, sandy loam	SM	A-1, A-2	0	0	75-100	55-85	30-50	15-30	15-20	NP-5
	33-49	gravelly loamy sand, gravelly sand, loamy coarse sand	SM, SP-SM	A-1, A-2	0	0	75-100	55-90	15-40	5-30	---	NP
	49-60	very gravelly coarse sand, extremely gravelly coarse sand	GM, GP, SP-SM, GP-GM	A-1	0	0	40-65	10-35	5-30	0-15	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1660: Wendane-----	0-8	silt loam	ML	A-4	0	0	100	100	90-100	70-95	30-40	NP-10
	8-42	silt loam, very fine sandy loam	ML	A-4	0	0	100	100	95-100	70-80	30-40	NP-10
	42-60	stratified silt loam to clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-95	35-45	10-20
Logan-----	0-10	silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-95	25-35	5-15
	10-40	silt loam, silty clay loam	CL, ML	A-7	0	0	100	100	95-100	85-95	40-50	15-20
	40-60	silty clay loam, silty clay	CH, CL	A-7	0	0	100	100	95-100	90-95	45-55	20-30
1670: Wendane-----	0-8	silt loam	ML	A-4	0	0	100	100	90-100	70-85	30-40	NP-10
	8-42	silt loam, very fine sandy loam	ML	A-4	0	0	100	100	95-100	70-80	30-40	NP-10
	42-60	stratified silt loam to clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-95	35-45	10-20
Logan-----	0-10	silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-95	25-35	5-15
	10-40	silt loam, silty clay loam	CL, ML	A-7	0	0	100	100	95-100	85-95	40-50	15-20
	40-60	silty clay loam, silty clay	CH, CL	A-7	0	0	100	100	95-100	90-95	45-55	20-30
Wendane-----	0-8	silt loam	ML	A-4	0	0	100	100	90-100	70-95	30-40	NP-10
	8-42	silt loam, very fine sandy loam	ML	A-4	0	0	100	100	95-100	70-80	30-40	NP-10
	42-60	stratified silt loam to clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-95	35-45	10-20
1680: Rubylake-----	0-7	clay loam	CL	A-6	0	0	100	100	85-95	80-90	35-40	15-20
	7-23	silt loam	ML	A-4	0	0	100	100	95-100	85-90	30-40	5-10
	23-55	silt loam	ML	A-4	0	0	100	100	95-100	85-90	30-40	5-10
	55-60	silt loam, silty clay loam	CL, ML	A-6, A-7	0	0	100	100	90-100	80-85	35-45	10-20
Kolda-----	0-6	silt loam	CL-ML	A-4	0	0	100	100	80-90	60-80	20-30	5-10
	6-15	silt loam	CL	A-6	0	0	100	100	80-90	60-80	30-35	10-15
	15-36	silty clay	CL	A-7	0	0	100	100	90-100	85-95	40-45	15-20
	36-60	clay	CH, CL	A-7	0	0	100	100	90-100	85-95	45-65	20-35
Wendane-----	0-8	silt loam	ML	A-4	0	0	100	100	90-100	70-85	30-40	NP-10
	8-42	silt loam, very fine sandy loam	ML	A-4	0	0	100	100	95-100	70-80	30-40	NP-10
	42-60	stratified silt loam to clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-95	35-45	10-20

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1681: Wendane-----	0-8	silt loam	ML	A-4	0	0	100	100	90-100	70-85	30-40	NP-10
	8-42	silt loam, very fine sandy loam	ML	A-4	0	0	100	100	95-100	70-80	30-40	NP-10
	42-60	stratified silt loam to clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-95	35-45	10-20
Logan-----	0-10	silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-95	25-35	5-15
	10-40	silt loam, silty clay loam	CL, ML	A-7	0	0	100	100	95-100	85-95	40-50	15-20
	40-60	silty clay loam, silty clay	CH, CL	A-7	0	0	100	100	95-100	90-95	45-55	20-30
Umberland-----	0-15	silt loam	ML	A-4	0	0	100	100	95-100	60-80	25-35	NP-10
	15-60	silty clay, silty clay loam, clay	CH, CL	A-7	0	0	100	100	95-100	85-95	40-55	20-30
1690: Krenka-----	0-17	loam	SC-SM	A-4	0	0	80-90	75-85	50-60	40-50	20-25	5-10
	17-31	gravelly sandy clay loam, very gravelly sandy clay loam	GC	A-2	0	0-10	45-65	40-60	30-40	20-35	25-35	10-15
	31-60	extremely cobbly sandy clay loam, very cobbly sandy clay loam	GC	A-2	0-15	15-30	35-55	30-50	20-35	15-25	25-35	10-15
Secrepass-----	0-7	gravelly loam	GC-GM, SC-SM	A-4	0	0	55-80	50-75	40-65	35-50	20-25	5-10
	7-14	gravelly clay loam, very gravelly clay loam	GC	A-2, A-7, A-6	0	0-10	50-65	45-60	35-50	25-40	30-45	10-20
	14-31	very gravelly clay, very cobbly clay	GC	A-2, A-7	0	10-25	40-60	35-55	30-50	25-45	45-65	25-35
	31-60	extremely gravelly sandy loam	GC-GM	A-2	0-10	10-25	40-50	35-45	25-35	10-25	20-25	5-10
1700: Heechee-----	0-7	cobbly loam	CL, SC-SM, CL-ML, SC	A-4, A-6	0-10	15-25	80-95	70-80	60-75	45-60	25-35	5-15
	7-20	very cobbly clay loam, very gravelly sandy clay loam, very cobbly loam	GC	A-2, A-6	0-15	25-50	45-75	35-65	30-60	25-50	30-40	10-20
	20-60	extremely cobbly sandy loam, extremely cobbly coarse sandy loam, extremely cobbly loam	GM, GP-GC, GC-GM, GP-GM	A-1, A-2	0-10	45-55	30-60	20-50	10-35	5-20	20-30	NP-10

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Rubicity-----	0-3	gravelly sandy loam	SM	A-2, A-4	0	0	65-90	50-75	40-60	25-45	20-25	NP-5
	3-42	stratified gravelly sandy loam to very gravelly sandy loam	SM	A-2, A-4	0	0	65-90	50-75	40-60	25-45	20-25	NP-5
	42-60	sandy loam, gravelly sandy loam	SM	A-4	0	0	75-95	60-85	50-70	35-50	20-25	NP-5
Heeshee-----	0-7	extremely stony sandy loam	GC-GM	A-2	25-40	10-15	50-65	40-55	30-45	15-30	20-30	5-10
	7-30	very gravelly sandy clay loam, very cobbly clay loam, very cobbly loam	GC	A-2, A-6	0-15	15-50	45-75	35-65	30-60	25-50	30-40	10-20
	30-60	extremely cobbly coarse sandy loam, extremely cobbly sandy loam	GM, GC-GM, GP-GC, GP-GM	A-1, A-2	0-10	45-55	30-60	20-50	10-35	5-20	20-30	NP-10
1702: Heeshee-----	0-7	cobbly loam	CL-ML, CL, SC, SC-SM	A-4, A-6	0-10	15-25	80-95	70-80	60-75	45-60	25-35	5-15
	7-20	very cobbly clay loam, very gravelly sandy clay loam, very cobbly loam	GC	A-2, A-6	0-15	25-50	45-75	35-65	30-60	25-50	30-40	10-20
	20-60	extremely cobbly sandy loam, extremely cobbly coarse sandy loam, extremely cobbly loam	GC-GM, GM, GP-GM, GP-GC	A-1, A-2	0-10	45-55	30-60	20-50	10-35	5-20	20-30	NP-10
McIvey-----	0-12	very cobbly loam	GC	A-6	0	25-50	50-70	45-65	40-60	35-50	30-40	10-15
	12-18	very gravelly clay loam, gravelly clay loam	CL, GC, SC	A-7	0	0-10	55-85	45-75	40-70	35-60	40-45	20-25
	18-60	very gravelly clay, very cobbly clay, extremely cobbly clay	GC	A-2, A-7	0-25	10-55	45-60	35-50	35-45	30-45	45-55	30-35
Rubicity-----	0-3	gravelly sandy loam	SM	A-2, A-4	0	0	65-90	50-75	40-60	25-45	20-25	NP-5
	3-42	stratified gravelly very gravelly sandy loam	SM	A-2, A-4	0	0	65-90	50-75	40-60	25-45	20-25	NP-5
	42-60	sandy loam, gravelly sandy loam	SM	A-4	0	0	75-95	60-85	50-70	35-50	20-25	NP-5

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1710: James Canyon----	0-8	fine sandy loam	SC-SM	A-4	0	0	100	100	75-90	35-50	20-25	5-10
	8-33	stratified gravelly loam to silt loam	GC, SC	A-2, A-6	0	0	60-85	50-75	40-60	25-40	25-35	10-15
	33-60	fine sandy loam	SC-SM	A-2, A-4	0	0	95-100	90-100	75-85	30-50	20-25	5-10
Wendane-----	0-8	silt loam	ML	A-4	0	0	100	100	90-100	70-85	30-40	NP-10
	8-42	silt loam, very fine sandy loam	ML	A-4	0	0	100	100	95-100	70-80	30-40	NP-10
	42-60	stratified silt loam to clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-95	35-45	10-20
1711: James Canyon----	0-8	fine sandy loam	SC-SM	A-4	0	0	100	100	75-90	35-50	20-25	5-10
	8-33	stratified gravelly loam to silt loam	GC, SC	A-2, A-6	0	0	60-85	50-75	40-60	25-40	25-35	10-15
	33-60	fine sandy loam	SC-SM	A-2, A-4	0	0	95-100	90-100	75-85	30-50	20-25	5-10
Wendane-----	0-8	silt loam	ML	A-4	0	0	100	100	90-100	70-85	30-40	NP-10
	8-42	silt loam, very fine sandy loam	ML	A-4	0	0	100	100	95-100	70-80	30-40	NP-10
	42-60	stratified silt loam to clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-95	35-45	10-20
Wendane-----	0-8	silt loam	ML	A-4	0	0	100	100	90-100	70-95	30-40	NP-10
	8-42	silt loam, very fine sandy loam	ML	A-4	0	0	100	100	95-100	70-80	30-40	NP-10
	42-60	stratified silt loam to clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-95	35-45	10-20
1720: Welch-----	0-8	loam	CL-ML	A-4	0	0	95-100	95-100	85-95	60-70	25-30	5-10
	8-60	stratified sandy loam to silty clay loam	CL	A-6	0	0	80-100	75-100	65-90	50-70	30-40	10-20
1721: Welch-----	0-8	loam	CL-ML	A-4	0	0	95-100	95-100	85-95	60-70	25-30	5-10
	8-60	stratified sandy loam to silty clay loam	CL	A-6	0	0	80-100	75-100	65-90	50-70	30-40	10-20
Welsum-----	0-11	silt loam	CL	A-6	0	0	100	100	90-100	60-75	30-35	10-15
	11-25	clay loam, silty clay loam	CL	A-6	0	0-10	95-100	85-100	80-95	75-85	35-40	15-20
	25-60	extremely cobbly loamy sand, very cobbly sand, extremely gravelly sand	GP-GM, GM, SM, SP-SM	A-1	0-15	10-45	30-70	25-65	15-40	5-15	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1722: Welch-----	0-5	loam	CL, CL-ML	A-4	0	0	95-100	95-100	85-95	60-70	25-30	5-10
	5-41	stratified sandy loam to silty clay loam	CL	A-6	0	0	80-100	75-100	65-90	50-70	30-40	10-20
	41-61	stratified extremely gravelly coarse sand to very gravelly loamy sand	GP, GP-GM	A-1	0	0-10	20-50	15-50	10-35	0-10	---	NP
Slipback-----	0-12	sandy loam	SC-SM	A-4	0	0	85-95	75-90	50-65	35-50	20-25	5-10
	12-39	gravelly sandy clay loam	SC	A-2	0	0	65-85	55-75	40-50	20-35	35-40	15-20
	39-55	gravelly sandy loam	SC-SM	A-2	0	0	70-85	60-75	40-50	20-30	20-25	5-10
	55-60	very gravelly loamy coarse sand	GM, SM	A-1	0	0	35-65	25-50	15-35	10-15	---	NP
Welch-----	0-5	loam	CL, CL-ML	A-4	0	0	95-100	95-100	85-95	60-70	25-30	5-10
	5-41	stratified sandy loam to silty clay loam	CL	A-6	0	0	80-100	75-100	65-90	50-70	30-40	10-20
	41-61	stratified extremely gravelly coarse sand to very gravelly loamy sand	GP, GP-GM	A-1	0	0-10	20-50	15-50	10-35	0-10	---	NP
1723: Welch-----	0-8	loam	CL-ML	A-4	0	0	95-100	95-100	85-95	60-70	25-30	5-10
	8-60	stratified sandy loam to silty clay loam	CL	A-6	0	0	80-100	75-100	65-90	50-70	30-40	10-20
Welch-----	0-8	loam	CL-ML	A-4	0	0	95-100	95-100	85-95	60-70	25-30	5-10
	8-60	stratified sandy loam to silty clay loam	CL	A-6, A-7	0	0	80-100	75-100	65-90	50-70	35-45	15-20
1730: McIvey-----	0-12	very cobbly loam	GC	A-6	0	25-50	50-70	45-65	40-60	35-50	30-40	10-15
	12-18	very gravelly clay loam, gravelly clay loam	CL, SC, GC	A-7	0	0-10	55-85	45-75	40-70	35-60	40-45	20-25
	18-60	very gravelly clay, very cobbly clay, extremely cobbly clay	GC	A-2, A-7	0-25	10-55	45-60	35-50	35-45	30-45	45-55	30-35
Donna-----	0-7	gravelly loam	CL	A-6	0	0	65-75	60-75	55-70	50-60	30-40	10-20
	7-33	clay	CH	A-7	0	0	80-90	75-85	75-80	70-80	60-70	30-40
	33-43	indurated			---	---	---	---	---	---	---	---
	43-60	stratified extremely gravelly sandy loam to gravelly sandy clay loam	GC	A-2	0-5	10-35	40-55	30-40	20-30	10-20	30-40	10-20

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1731: McIvey-----	0-12	very cobbly loam	GC	A-6	0	25-50	50-70	45-65	40-60	35-50	30-40	10-15
	12-18	very gravelly clay loam, gravelly clay loam	CL, SC, GC	A-7	0	0-10	55-85	45-75	40-70	35-60	40-45	20-25
	18-60	very gravelly clay, very cobbly clay, extremely cobbly clay	GC	A-2, A-7	0-25	10-55	45-60	35-50	35-45	30-45	45-55	30-35
Chen-----	0-3	very gravelly loam	GC	A-2	0	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	3-16	very gravelly clay, extremely gravelly clay, very cobbly clay	GC	A-2, A-7	0-5	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	16-20	unweathered bedrock			---	---	---	---	---	---	---	---
Donna-----	0-7	silt loam	CL, CL-ML	A-4, A-6	0	0	95-100	90-100	75-95	50-75	25-35	5-15
	7-33	clay	CH	A-7	0	0	80-90	75-85	75-80	70-80	60-70	30-40
	33-43	indurated			---	---	---	---	---	---	---	---
	43-60	stratified extremely gravelly sandy loam to gravelly sandy clay loam	GC	A-2	0-5	10-35	40-55	30-40	20-30	10-20	30-40	10-20
1732: McIvey-----	0-12	gravelly loam	GC, SC	A-6	0	0-10	60-85	50-75	45-70	35-50	30-40	10-15
	12-18	very gravelly clay loam, gravelly clay loam	CL, GC, SC	A-7	0	0-10	55-85	45-75	40-70	35-55	40-45	15-20
	18-60	very gravelly clay, very cobbly clay, extremely cobbly clay	GC	A-2, A-7	0	0-55	45-60	35-50	35-45	30-45	45-55	20-30
Stampede-----	0-11	gravelly loam	CL	A-6	0	0	70-80	65-75	60-70	50-65	25-35	10-15
	11-35	clay, silty clay	CH	A-7	0	0-10	90-100	85-95	80-90	70-85	50-60	30-40
	35-45	indurated			---	---	---	---	---	---	---	---
Heechee-----	0-7	cobbly loam	CL-ML, SC, CL, SC-SM	A-4, A-6	0-10	15-25	80-95	70-80	60-75	45-60	25-35	5-15
	7-20	very cobbly clay loam, very gravelly sandy clay loam, very cobbly loam	GC	A-2, A-6	0-15	25-50	45-75	35-65	30-60	25-50	30-40	10-20
	20-60	extremely cobbly sandy loam, extremely cobbly coarse sandy loam, extremely cobbly loam	GM, GC-GM, GP-GC, GP-GM	A-1, A-2	0-10	45-55	30-60	20-50	10-35	5-20	20-30	NP-10

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1740: Slipback-----	0-12	sandy loam	SC-SM	A-4	0	0	85-95	75-90	50-65	35-50	20-25	5-10
	12-39	gravelly sandy clay loam	SC	A-2	0	0	65-85	55-75	40-50	20-35	35-40	15-20
	39-55	gravelly sandy loam	SC-SM	A-2	0	0	70-85	60-75	40-50	20-30	20-25	5-10
	55-60	very gravelly loamy coarse sand	GM, SM	A-1	0	0	35-65	25-50	15-35	10-15	---	NP
Welch-----	0-5	loam	CL, CL-ML	A-4	0	0	95-100	95-100	85-95	60-70	25-30	5-10
	5-41	stratified sandy loam to silty clay loam	CL	A-6	0	0	80-100	75-100	65-90	50-70	30-40	10-20
	41-61	stratified extremely gravelly coarse sand to very gravelly loamy sand	GP, GP-GM	A-1	0	0-10	20-50	15-50	10-35	0-10	---	NP
1741: Slipback-----	0-12	sandy loam	SC-SM	A-4	0	0	85-95	75-90	50-65	35-50	20-25	5-10
	12-39	gravelly sandy clay loam	SC	A-2	0	0	65-85	55-75	40-50	20-35	35-40	15-20
	39-55	gravelly sandy loam	SC-SM	A-2	0	0	70-85	60-75	40-50	20-30	20-25	5-10
	55-60	very gravelly loamy coarse sand	GM, SM	A-1	0	0	35-65	25-50	15-35	10-15	---	NP
Shantown-----	0-2	gravelly loamy sand	SM	A-1, A-2	0	0	75-90	60-75	20-45	10-35	---	NP
	2-11	coarse sandy loam, sandy loam	SM	A-1, A-2, A-4	0	0	85-100	75-90	20-50	10-40	---	NP
	11-33	coarse sandy loam, gravelly sandy loam, sandy loam	SM	A-1, A-2	0	0	75-100	55-85	30-50	15-30	15-20	NP-5
	33-49	gravelly loamy sand, gravelly sand, loamy coarse sand	SM, SP-SM	A-1, A-2	0	0	75-100	55-90	15-40	5-30	---	NP
	49-60	very gravelly coarse sand, extremely gravelly coarse sand	GM, GP, SP- SM, GP-GM	A-1	0	0	40-65	10-35	5-30	0-15	---	NP
Toba-----	0-4	loam	CL	A-6	0	0	100	100	70-85	50-70	30-35	10-15
	4-14	clay loam	CL	A-6	0	0	100	100	75-90	60-70	35-40	15-20
	14-23	loamy fine sand	SM	A-2	0	0	90-100	85-100	75-90	20-35	---	NP
	23-60	fine sand, sand	SP-SM	A-3	0	0	90-100	85-100	75-90	5-10	---	NP

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1750: Heechee-----	0-7	gravelly loam	CL-ML, SC, CL, SC-SM	A-4, A-6	0	0-5	75-85	55-75	40-60	40-55	25-35	5-15
	7-20	very cobbly clay loam, very gravelly sandy clay loam, very cobbly loam	GC	A-2, A-6	0-15	15-50	45-75	35-65	30-60	25-50	30-40	10-20
	20-60	extremely cobbly sandy loam, extremely cobbly coarse sandy loam	GM, GC-GM, GP-GC, GP-GM	A-1, A-2	0-10	45-55	30-60	20-50	10-35	5-20	20-30	NP-10
Welch-----	0-8	loam	CL-ML	A-4	0	0	95-100	95-100	85-95	60-70	25-30	5-10
	8-60	stratified sandy loam to silty clay loam	CL	A-6	0	0	80-100	75-100	65-90	50-70	30-40	10-20
Welch-----	0-8	loam	CL-ML	A-4	0	0	95-100	95-100	85-95	60-70	25-30	5-10
	8-60	stratified sandy loam to silty clay loam	CL	A-6, A-7	0	0	80-100	75-100	65-90	50-70	35-45	15-20
1760: Lykal-----	0-12	silt loam	ML	A-4	0	0	100	100	85-95	75-85	25-30	NP-5
	12-41	silt loam	ML	A-4	0	0	100	100	90-100	75-85	25-30	NP-5
	41-51	silt loam, loam	ML	A-4	0	0	95-100	90-100	75-85	65-75	25-30	NP-5
	51-60	stratified gravelly sandy loam to gravelly clay loam	GM	A-4	0	0	60-75	55-70	50-60	40-50	30-35	5-10
Wendane-----	0-8	silt loam	ML	A-4	0	0	100	100	90-100	70-95	30-40	NP-10
	8-42	silt loam, very fine sandy loam	ML	A-4	0	0	100	100	95-100	70-80	30-40	NP-10
	42-60	stratified silt loam to clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-95	35-45	10-20
James Canyon----	0-8	fine sandy loam	SC-SM	A-4	0	0	100	100	75-90	35-50	20-25	5-10
	8-33	stratified gravelly loam to silt loam	GC, SC	A-2, A-6	0	0	60-85	50-75	40-60	25-40	25-35	10-15
	33-60	fine sandy loam	SC-SM	A-2, A-4	0	0	95-100	90-100	75-85	30-50	20-25	5-10
1770: Donna-----	0-7	gravelly loam	CL	A-6	0	0	65-75	60-75	55-70	50-60	30-40	10-20
	7-33	clay	CH	A-7	0	0	80-90	75-85	75-80	70-80	60-70	30-40
	33-43	indurated			---	---	---	---	---	---	---	---
	43-60	stratified extremely gravelly sandy loam to gravelly sandy clay loam	GC	A-2	0-5	10-35	40-55	30-40	20-30	10-20	30-40	10-20

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct					Pct	
McIvey-----	In											
	0-12	very cobbly loam	GC	A-6	0	25-50	50-70	45-65	40-60	35-50	30-40	10-15
	12-18	very gravelly clay loam, gravelly clay loam	GC, CL, SC	A-7	0	0-10	55-85	45-75	40-70	35-60	40-45	20-25
	18-60	very gravelly clay, very cobbly clay, extremely cobbly clay	GC	A-2, A-7	0-25	10-55	45-60	35-50	35-45	30-45	45-55	30-35
Heechee-----	0-7	very stony loam	GC-GM, GC, SC, SC-SM	A-2	10-25	5-15	55-70	45-60	35-50	25-35	25-35	5-15
	7-30	very gravelly sandy clay loam, very cobbly clay loam, very cobbly loam	GC	A-2, A-6	0-15	15-50	45-75	35-65	30-60	25-50	30-40	10-20
	30-60	extremely cobbly coarse sandy loam, extremely cobbly sandy loam	GC-GM, GP-GM, GM, GP-GC	A-1, A-2	0-10	45-55	30-60	20-50	10-35	5-20	20-30	NP-10
1780: Schoer-----	0-3	loam	CL	A-6	0	0	80-95	75-90	60-75	50-60	30-35	10-15
	3-16	clay loam, sandy clay loam, clay loam	CL, SC	A-7	0	0	80-95	75-90	55-70	40-60	40-50	20-25
	16-23	gravelly clay loam	GC, SC	A-7	0	0	55-80	50-75	40-60	35-50	40-50	20-30
	23-33	very gravelly sandy clay loam	GC	A-2	0	0	50-55	45-50	35-45	25-35	35-45	15-20
	33-60	very gravelly coarse sand, gravelly loamy sand	GM, GP-GM	A-1	0	0	40-60	35-55	25-40	5-20	---	NP
Welch-----	0-8	loam	CL-ML	A-4	0	0	95-100	95-100	85-95	60-70	25-30	5-10
	8-60	stratified sandy loam to silty clay loam	CL	A-6	0	0	80-100	75-100	65-90	50-70	30-40	10-20
1790: Donna-----	0-7	gravelly loam	CL	A-6	0	0	65-75	60-75	55-70	50-60	30-40	10-20
	7-33	clay	CH	A-7	0	0	80-90	75-85	75-80	70-80	60-70	30-40
	33-43	indurated			---	---	---	---	---	---	---	---
	43-60	stratified extremely gravelly sandy loam to gravelly sandy clay loam	GC	A-2	0-5	10-35	40-55	30-40	20-30	10-20	30-40	10-20

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct					Pct	
Krenka-----	In											
	0-17	loam	SC-SM	A-4	0	0	80-90	75-85	50-60	40-50	20-25	5-10
	17-31	gravelly sandy clay loam, very gravelly sandy clay loam	GC	A-2	0	0-10	45-65	40-60	30-40	20-35	25-35	10-15
	31-60	extremely cobbly sandy clay loam, very cobbly sandy clay loam	GC	A-2	0-15	15-30	35-55	30-50	20-35	15-25	25-35	10-15
McIvey-----	0-12	very cobbly loam	GC	A-6	0	25-50	50-70	45-65	40-60	35-50	30-40	10-15
	12-18	very gravelly clay loam, gravelly clay loam	CL, SC, GC	A-7	0	0-10	55-85	45-75	40-70	35-60	40-45	20-25
	18-60	very gravelly clay, very cobbly clay, extremely cobbly clay	GC	A-2, A-7	0-25	10-55	45-60	35-50	35-45	30-45	45-55	30-35
1800: Chen-----	0-3	very gravelly loam	GC	A-2	0	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	3-16	very gravelly clay, extremely gravelly clay, very cobbly clay	GC	A-2, A-7	0-5	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	16-20	unweathered bedrock			---	---	---	---	---	---	---	---
Graley-----	0-7	stony loam	CL-ML, ML, SM, SC-SM	A-4	1-5	5-15	70-95	60-90	50-85	35-65	20-30	NP-10
	7-19	very gravelly clay loam, very gravelly clay	GC	A-2, A-7	0-25	0-25	40-55	35-50	30-50	25-40	45-55	20-30
	19-23	unweathered bedrock			---	---	---	---	---	---	---	---
Rock Outcrop----	---	---	---	---	---	---	---	---	---	---	---	---
1810: Sumine-----	0-9	very gravelly loam	GC-GM	A-2, A-4	0	10-15	50-65	45-60	40-50	30-40	20-30	5-10
	9-23	very gravelly clay loam, very cobbly clay loam, very gravelly loam	GC	A-2, A-7, A-6	0-5	15-40	45-70	35-65	30-50	25-45	35-45	15-25
	23-27	unweathered bedrock			---	---	---	---	---	---	---	---
Tusel-----	0-17	gravelly loam	ML, SM	A-4	0	0	75-95	65-85	55-75	45-65	25-35	NP-10
	17-60	extremely gravelly sandy clay loam, extremely gravelly clay loam, very gravelly clay loam	GC	A-2	0	15-45	30-50	25-40	20-35	15-30	30-40	10-20

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
Hapgood-----	0-8	very gravelly loam	GC-GM, GM	A-2	0	0	40-55	35-50	30-40	25-35	20-30	NP-10
	8-36	very gravelly loam, very gravelly fine sandy loam	GC, GC-GM	A-2	0	0-10	50-60	45-55	35-50	25-35	25-30	5-10
	36-50	very cobbly loam, very gravelly sandy loam	GM	A-1, A-2	0	15-40	55-65	50-60	35-45	20-35	20-30	NP-5
	50-54	unweathered bedrock			---	---	---	---	---	---	---	---
1820: Husaa-----	0-16	silt loam stratified	CL-ML, ML	A-4	0	0	100	95-100	90-95	70-80	25-35	5-10
	16-60	sandy clay loam to silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-90	50-80	30-45	10-20
Halleck-----	0-14	silt loam	ML	A-4	0	0	100	100	90-100	75-90	30-35	5-10
	14-41	stratified silt loam to silty clay loam	CL, ML	A-6, A-7	0	0	100	100	95-100	85-95	30-50	10-20
	41-60	very gravelly coarse sandy loam	GM	A-1	0	0	40-55	35-50	15-35	10-25	15-25	NP-5
Welsun-----	0-11	silt loam	CL	A-6	0	0	100	100	90-100	60-75	30-35	10-15
	11-25	clay loam, silty clay loam	CL	A-6	0	0-10	95-100	85-100	80-95	75-85	35-40	15-20
	25-60	extremely cobbly loamy sand, very cobbly sand, extremely gravelly sand	GM, GP-GM, SP-SM, SM	A-1	0-15	10-45	30-70	25-65	15-40	5-15	---	NP
1831: Enko-----	0-2	fine sandy loam	SC-SM	A-4	0	0	95-100	85-100	60-75	35-50	20-30	5-10
	2-14	loam, sandy loam, fine sandy loam	CL-ML, SC-SM	A-4	0	0	95-100	85-100	60-90	35-70	20-30	5-10
	14-32	sandy loam, fine sandy loam, loam	CL-ML, SC-SM	A-2, A-4	0	0	85-100	75-100	60-90	30-65	20-25	5-10
	32-60	sandy loam, fine sandy loam, loam	CL-ML, SC-SM	A-2, A-4	0	0	85-100	75-100	60-90	30-65	20-25	5-10
Kelk-----	0-12	silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	85-95	25-35	5-15
	12-20	silt loam	CL, CL-ML	A-4, A-6	0	0	95-100	95-100	95-100	85-95	25-35	5-15
	20-60	silt loam	CL, CL-ML	A-4, A-6	0	0	95-100	90-100	85-100	75-95	25-35	5-15
Enko-----	0-2	silt loam	CL-ML	A-4	0	0	95-100	85-100	75-100	50-70	20-30	5-10
	2-14	loam, sandy loam, fine sandy loam	CL-ML, SC-SM	A-4	0	0	95-100	85-100	60-90	35-70	20-30	5-10
	14-32	sandy loam, fine sandy loam, loam	CL-ML, SC-SM	A-2, A-4	0	0	85-100	75-100	60-90	30-65	20-25	5-10
	32-60	sandy loam, fine sandy loam, loam	CL-ML, SC-SM	A-2, A-4	0	0	85-100	75-100	60-90	30-65	20-25	5-10

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage Passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches						
							4	10	40	200		
	In				Pct	Pct					Pct	
1840: Amene-----	0-12	very gravelly silt loam	GC	A-2, A-6	0	0	40-55	35-50	30-45	25-45	30-35	10-15
	12-18	very gravelly silt loam, very gravelly loam	GC	A-2, A-6	0	0-25	35-60	30-45	25-45	20-40	30-35	10-15
	18-22	unweathered bedrock			---	---	---	---	---	---	---	---
Belsac-----	0-21	very gravelly loam	GC-GM	A-2	0	0-15	35-55	30-50	25-45	20-35	25-30	5-10
	21-35	very gravelly loam	GC-GM	A-2	0	0-15	35-55	30-50	25-45	20-35	25-30	5-10
	35-39	weathered bedrock			---	---	---	---	---	---	---	---
Chen-----	0-3	very gravelly loam	GC	A-2	0	0-15	50-65	35-50	30-45	25-35	30-35	10-15
	3-16	very gravelly clay, extremely gravelly clay, very cobbly clay	GC	A-2, A-7	0-5	0-45	35-50	25-45	25-45	20-40	50-60	25-35
	16-20	unweathered bedrock			---	---	---	---	---	---	---	---
1850: Bullump-----	0-10	very gravelly loam	GC, SC	A-2	0	0-10	45-70	35-50	30-45	25-35	25-35	10-15
	10-49	very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam	GC	A-2, A-7, A-6	0	0-15	40-65	30-50	25-45	15-40	35-45	15-20
	49-53	unweathered bedrock			---	---	---	---	---	---	---	---
Cleavage-----	0-7	extremely gravelly loam	GC-GM	A-2	0	0-10	35-45	15-25	10-25	10-20	25-30	5-10
	7-15	very cobbly clay loam, extremely gravelly clay loam, very gravelly loam	GC	A-2	0-5	0-45	40-55	30-45	25-45	20-35	30-45	10-20
	15-19	unweathered bedrock			---	---	---	---	---	---	---	---
Rock Outcrop----	---	---	---	---	---	---	---	---	---	---	---	
1861: Equis-----	0-6	silty clay	MH	A-7	0	0	100	100	95-100	95-100	60-80	20-30
	6-24	silty clay, clay	MH	A-7	0	0	100	100	95-100	95-100	60-80	20-30
	24-41	silty clay, silty clay loam	MH	A-7	0	0	100	100	95-100	95-100	50-70	15-25
	41-60	silty clay loam, silty clay, silt loam	MH, ML	A-6, A-7	0	0	100	95-100	90-100	85-95	35-70	10-25

TABLE 10.--ENGINEERING INDEX PROPERTIES--Continued

[illegible]

TABLE 11.--PHYSICAL PROPERTIES OF SOILS

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
0053: Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
Urmafot-----	0-7	18-27	1.25-1.45	4.00-14.00	0.06-0.12	0.0-2.9	2.0-4.0	.10	.32	1	6	48
	7-16	18-27	1.35-1.55	4.00-14.00	0.10-0.15	3.0-5.9	1.0-2.0	.20	.37			
	16-29	---	---	0.00-0.01	---	---	---	---	---			
	29-60	5-15	1.50-1.70	14.00-42.00	0.03-0.06	0.0-2.9	0.0-0.8	.02	.17			
0062: Antoft-----	0-4	15-25	1.35-1.55	4.00-14.00	0.07-0.11	0.0-2.9	1.0-2.0	.15	.37	1	6	48
	4-15	12-27	1.40-1.60	4.00-14.00	0.06-0.11	0.0-2.9	0.5-1.0	.10	.37			
	15-25	---	---	0.00-0.01	---	---	---	---	---			
Rock Outcrop----	---	---	---	---	---	---	---	---	---	-	---	---
Antoft-----	0-2	15-25	1.35-1.55	4.00-14.00	0.07-0.11	0.0-2.9	1.0-2.0	.15	.37	1	6	48
	2-12	12-27	1.40-1.60	4.00-14.00	0.06-0.11	0.0-2.9	0.5-1.0	.10	.37			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
0066: Zimbob-----	0-2	10-18	1.15-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.32	1	6	48
	2-11	10-18	1.20-1.40	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.37			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Zimbob-----	0-1	10-18	1.15-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.32	1	6	48
	1-6	10-18	1.20-1.40	4.00-14.00	0.06-0.09	0.0-2.9	0.5-1.0	.10	.32			
	6-10	---	---	0.00-0.01	---	---	---	---	---			
0067: Tecomar-----	0-2	18-27	1.30-1.45	4.00-14.00	0.03-0.06	0.0-2.9	1.0-2.0	.17	.43	1	8	0
	2-14	20-27	1.30-1.45	4.00-14.00	0.04-0.09	0.0-2.9	0.0-0.8	.10	.64			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
Tecomar-----	0-2	18-27	1.30-1.45	4.00-14.00	0.03-0.06	0.0-2.9	1.0-2.0	.17	.43	1	8	0
	2-12	20-27	1.30-1.45	4.00-14.00	0.04-0.09	0.0-2.9	0.0-0.8	.10	.64			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
Pookaloo-----	0-2	10-18	1.20-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.20	.43	1	6	48
	2-14	10-18	1.35-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.0-0.5	.20	.55			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
0069: Zimbob-----	0-2	10-18	1.15-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.32	1	6	48
	2-11	10-18	1.20-1.40	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.37			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Hyzen-----	0-3	8-18	1.20-1.40	4.00-14.00	0.06-0.09	0.0-2.9	2.0-5.0	.17	.43	1	8	0
	3-13	10-18	1.20-1.40	4.00-14.00	0.05-0.08	0.0-2.9	2.0-4.0	.15	.43			
	13-17	---	---	0.00-0.01	---	---	---	---	---			
Rock Outcrop----	---	---	---	---	---	---	---	---	---	-	---	---
0070: Stewval-----	0-2	12-18	1.35-1.50	14.00-42.00	0.07-0.09	0.0-2.9	0.5-2.0	.15	.43	1	5	56
	2-6	24-30	1.30-1.45	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.43			
	6-10	---	---	0.00-0.01	---	---	---	---	---			
Eastwell-----	0-5	10-18	1.25-1.40	14.00-42.00	0.13-0.15	0.0-2.9	1.0-2.0	.24	.43	2	4	86
	5-18	10-27	1.30-1.50	4.00-14.00	0.08-0.11	0.0-2.9	0.5-2.0	.24	.32			
	18-27	---	---	0.42-1.40	---	---	---	---	---			
	27-60	10-20	1.35-1.55	14.00-42.00	0.08-0.11	0.0-2.9	0.0-0.5	.24	.43			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
0071: Stewval-----	0-2	12-18	1.35-1.50	14.00-42.00	0.07-0.09	0.0-2.9	0.5-2.0	.15	.43	1	5	56
	2-6	24-30	1.30-1.45	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.43			
	6-10	---	---	0.00-0.01	---	---	---	---	---			
Wesfil-----	0-6	12-18	1.30-1.50	4.00-14.00	0.07-0.10	0.0-2.9	1.0-2.0	.10	.43	1	6	48
	6-10	---	---	0.00-0.01	---	---	---	---	---			
Rock Outcrop----	---	---	---	---	---	---	---	---	---	-	---	---
0080: Stewval-----	0-2	12-18	1.35-1.50	14.00-42.00	0.07-0.09	0.0-2.9	0.5-2.0	.15	.43	1	5	56
	2-6	24-30	1.30-1.45	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.43			
	6-10	---	---	0.00-0.01	---	---	---	---	---			
0092: Wesfil-----	0-6	12-18	1.30-1.50	4.00-14.00	0.07-0.10	0.0-2.9	1.0-2.0	.10	.43	1	6	48
	6-10	---	---	0.00-0.01	---	---	---	---	---			
Wintermute-----	0-3	8-18	1.35-1.55	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.8	.28	.55	3	5	56
	3-15	8-18	1.40-1.60	4.00-14.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.49			
	15-53	8-18	1.45-1.65	0.42-1.40	0.03-0.07	0.0-2.9	0.0-0.5	.05	.37			
	53-60	27-35	1.40-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.17	.55			
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
0098: Wesfil-----	0-6	12-18	1.30-1.50	4.00-14.00	0.07-0.10	0.0-2.9	1.0-2.0	.10	.43	1	6	48
	6-10	---	---	0.00-0.01	---	---	---	---	---			
Tarnach-----	0-3	18-27	1.35-1.55	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.15	.43	1	6	48
	3-12	18-27	1.40-1.60	4.00-14.00	0.09-0.11	0.0-2.9	0.5-1.0	.15	.43			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
Wesfil-----	0-6	12-18	1.30-1.50	4.00-14.00	0.07-0.10	0.0-2.9	1.0-2.0	.10	.43	1	6	48
	6-10	---	---	0.00-0.01	---	---	---	---	---			
0099: Wesfil-----	0-6	12-18	1.30-1.50	4.00-14.00	0.07-0.10	0.0-2.9	1.0-2.0	.10	.43	1	6	48
	6-10	---	---	0.00-0.01	---	---	---	---	---			
Armespan-----	0-7	10-18	1.40-1.55	14.00-42.00	0.05-0.08	0.0-2.9	0.8-2.0	.10	.32	3	5	56
	7-21	12-18	1.35-1.50	4.00-14.00	0.09-0.12	0.0-2.9	0.0-0.5	.24	.37			
	21-32	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.24			
	32-60	5-10	1.45-1.60	42.00-141.0	0.02-0.05	0.0-2.9	0.0-0.5	.05	.17			
Heist-----	0-4	8-18	1.35-1.55	4.00-14.00	0.19-0.21	0.0-2.9	0.6-1.0	.55	.55	5	4L	86
	4-40	8-18	1.45-1.65	14.00-42.00	0.11-0.13	0.0-2.9	0.6-1.0	.24	.32			
	40-60	8-18	1.45-1.65	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.6	.24	.32			
0100: Benin-----	0-7	15-25	1.30-1.50	4.00-14.00	0.17-0.19	0.0-2.9	0.0-0.5	.49	.49	3	4L	86
	7-60	40-50	1.50-1.70	0.01-0.42	0.14-0.16	6.0-8.9	0.0-0.5	.37	.37			
Mazuma-----	0-15	10-14	1.40-1.55	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43	5	4L	86
	15-60	5-15	1.45-1.65	14.00-42.00	0.10-0.14	0.0-2.9	0.0-0.5	.24	.28			
0101: Toano-----	0-9	8-15	1.35-1.55	4.00-14.00	0.14-0.16	0.0-2.9	0.5-1.0	.64	.64	5	4L	86
	9-27	8-15	1.40-1.60	4.00-14.00	0.14-0.16	0.0-2.9	0.0-0.5	.55	.55			
	27-60	8-15	1.40-1.60	4.00-14.00	0.14-0.16	0.0-2.9	0.0-0.5	.55	.55			
Linoyer-----	0-9	12-18	1.30-1.50	4.00-14.00	0.16-0.18	0.0-2.9	0.5-1.0	.49	.49	5	4L	86
	9-60	12-18	1.30-1.50	4.00-14.00	0.15-0.18	0.0-2.9	0.5-1.0	.49	.49			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
0103: Benin-----	0-7 7-60	15-25 40-50	1.30-1.50 1.50-1.70	4.00-14.00 0.01-0.42	0.17-0.19 0.14-0.16	0.0-2.9 6.0-8.9	0.0-0.5 0.0-0.5	.49 .37	.49 .37	3	4L	86
Playas-----	0-6 6-60	27-40 35-70	1.50-1.70 1.60-1.80	0.01-0.42 0.01-0.42	0.02-0.04 0.02-0.04	6.0-8.9 6.0-8.9	0.0-0.1 0.0-0.1	.37 .37	.37 .37	-	4L	86
0111: Gravier-----	0-3 3-60	8-18 8-18	1.45-1.65 1.50-1.70	14.00-42.00 14.00-42.00	0.06-0.08 0.04-0.10	0.0-2.9 0.0-2.9	0.0-0.5 0.0-0.5	.10 .05	.24 .17	5	5	56
Armespan-----	0-7 7-21 21-32 32-60	10-18 12-18 10-18 5-10	1.40-1.55 1.35-1.50 1.45-1.65 1.45-1.60	14.00-42.00 4.00-14.00 4.00-14.00 42.00-141.0	0.05-0.08 0.09-0.12 0.05-0.08 0.02-0.05	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	0.8-2.0 0.0-0.5 0.0-0.5 0.0-0.5	.10 .24 .10 .05	.32 .37 .24 .17	3	5	56
113: Gravier-----	0-3 3-44 44-60	8-18 8-18 0-5	1.45-1.60 1.30-1.50 1.40-1.60	4.00-14.00 14.00-42.00 42.00-141.0	0.13-0.15 0.04-0.10 0.02-0.04	0.0-2.9 0.0-2.9 0.0-2.9	0.0-0.8 0.0-0.5 0.0-0.5	.20 .05 .05	.37 .28 .24	4 4 4	5	56
Gravier-----	0-3 3-60	8-18 8-18	1.45-1.65 1.50-1.70	14.00-42.00 14.00-42.00	0.06-0.08 0.04-0.10	0.0-2.9 0.0-2.9	0.0-0.5 0.0-0.5	.10 .05	.24 .17	5 5		
Jericho-----	0-4 4-14 14-28 28-60	15-20 10-18 --- 2-4	1.40-1.60 1.50-1.70 --- 1.55-1.75	4.00-14.00 14.00-42.00 0.00-0.01 141.0-705.0	0.09-0.11 0.06-0.08 --- 0.02-0.03	0.0-2.9 0.0-2.9 --- 0.0-2.9	1.0-2.0 0.5-1.0 --- 0.0-0.5	.17 .05 --- .02	.37 .24 --- .15	1	6	48
0116: Gravier-----	0-3 3-44 44-60	8-18 8-18 0-5	1.45-1.60 1.30-1.50 1.40-1.60	4.00-14.00 14.00-42.00 42.00-141.0	0.13-0.15 0.04-0.10 0.02-0.04	0.0-2.9 0.0-2.9 0.0-2.9	0.0-0.8 0.0-0.5 0.0-0.5	.20 .05 .05	.37 .28 .24	4	5	56
Izamatch-----	0-3 3-13 13-22 22-60	8-18 8-18 0-8 0-8	1.50-1.70 1.50-1.70 1.55-1.70 1.60-1.75	14.00-42.00 14.00-42.00 42.00-141.0 42.00-141.0	0.07-0.09 0.04-0.09 0.03-0.05 0.03-0.05	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	0.0-0.5 0.0-0.5 0.0-0.5 0.0-0.5	.15 .10 .10 .05	.28 .24 .20 .20	2	4	86
Loray-----	0-12 12-60	10-15 0-8	1.55-1.65 1.50-1.65	14.00-42.00 141.0-705.0	0.07-0.09 0.03-0.05	0.0-2.9 0.0-2.9	0.5-1.0 0.0-0.5	.15 .05	.28 .20	2	4	86
0118: Gravier-----	0-3 3-60	8-18 8-18	1.45-1.65 1.50-1.70	14.00-42.00 14.00-42.00	0.06-0.08 0.04-0.10	0.0-2.9 0.0-2.9	0.0-0.5 0.0-0.5	.10 .05	.24 .17	5	5	56
Automal-----	0-8 8-49 49-60	15-25 10-20 5-15	1.30-1.50 1.40-1.60 1.50-1.70	4.00-14.00 0.42-1.40 0.42-1.40	0.14-0.18 0.04-0.06 0.03-0.05	0.0-2.9 0.0-2.9 0.0-2.9	1.0-2.0 0.0-1.0 0.0-0.1	.20 .02 .02	.55 .37 .10	5	5	56
Zerk-----	0-2 2-16 16-60	12-17 12-17 0-10	1.35-1.55 1.35-1.55 1.50-1.65	14.00-42.00 14.00-42.00 42.00-141.0	0.08-0.11 0.11-0.13 0.03-0.05	0.0-2.9 0.0-2.9 0.0-2.9	0.5-1.0 0.0-0.5 0.0-0.5	.17 .17 .05	.32 .37 .17	2	4	86
0119: Wintermute-----	0-3 3-15 15-53 53-60	12-18 8-18 8-18 27-35	1.40-1.60 1.40-1.60 1.45-1.65 1.40-1.60	4.00-14.00 4.00-14.00 0.42-1.40 0.42-1.40	0.10-0.15 0.10-0.16 0.03-0.07 0.12-0.18	0.0-2.9 0.0-2.9 0.0-2.9 3.0-5.9	0.0-0.6 0.0-0.5 0.0-0.5 0.0-0.5	.20 .28 .05 .17	.43 .49 .37 .55	3	4	86
Lincyer-----	0-9 9-60	12-18 12-18	1.30-1.50 1.30-1.50	4.00-14.00 4.00-14.00	0.14-0.16 0.15-0.18	0.0-2.9 0.0-2.9	0.5-1.0 0.5-1.0	.43 .49	.43 .49	5	3	86
0120: Izamatch-----	0-3 3-13 13-22 22-60	8-18 8-18 0-8 0-8	1.50-1.70 1.50-1.70 1.55-1.70 1.60-1.75	14.00-42.00 14.00-42.00 42.00-141.0 42.00-141.0	0.04-0.08 0.04-0.09 0.03-0.05 0.03-0.05	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	0.0-0.5 0.0-0.5 0.0-0.5 0.0-0.5	.10 .10 .10 .05	.37 .24 .20 .20	2	5	56

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Armespan-----	0-7	10-18	1.40-1.55	14.00-42.00	0.05-0.08	0.0-2.9	0.8-2.0	.10	.32	3	5	56
	7-21	12-18	1.35-1.50	4.00-14.00	0.09-0.12	0.0-2.9	0.0-0.5	.24	.37			
	21-32	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.24			
	32-60	5-10	1.45-1.60	42.00-141.0	0.02-0.05	0.0-2.9	0.0-0.5	.05	.17			
Cliffdown-----	0-6	10-18	1.40-1.55	14.00-42.00	0.06-0.07	0.0-2.9	0.5-1.0	.10	.32	5	5	56
	6-60	8-18	1.40-1.60	14.00-42.00	0.03-0.06	0.0-2.9	0.5-1.0	.10	.32			
0122: Gravier-----	0-3	8-18	1.45-1.65	4.00-14.00	0.13-0.15	0.0-2.9	0.0-0.5	.20	.37	5	5	56
	3-60	8-18	1.50-1.70	14.00-42.00	0.04-0.10	0.0-2.9	0.0-0.5	.05	.17			
Izamat-----	0-3	8-18	1.50-1.70	14.00-42.00	0.04-0.08	0.0-2.9	0.0-0.5	.10	.37	2	5	56
	3-13	8-18	1.50-1.70	14.00-42.00	0.04-0.09	0.0-2.9	0.0-0.5	.10	.24			
	13-22	0-8	1.55-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.20			
	22-60	0-8	1.60-1.75	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
0130: Tocole-----	0-5	5-18	1.45-1.65	14.00-42.00	0.11-0.13	0.0-2.9	0.5-1.0	.28	.32	5	3	86
	5-44	5-18	1.50-1.65	14.00-42.00	0.11-0.15	0.0-2.9	0.0-0.5	.28	.32			
	44-61	8-18	1.45-1.65	14.00-42.00	0.12-0.18	0.0-2.9	0.0-0.5	.32	.37			
Benin-----	0-7	15-25	1.30-1.50	4.00-14.00	0.17-0.19	0.0-2.9	0.0-0.5	.49	.49	3	4L	86
	7-60	40-50	1.50-1.70	0.01-0.42	0.14-0.16	6.0-8.9	0.0-0.5	.37	.37			
0140: Gollaher-----	0-5	15-27	1.05-1.20	4.00-14.00	0.04-0.06	0.0-2.9	2.0-4.0	.05	.32	1	8	0
	5-10	15-27	1.05-1.20	4.00-14.00	0.04-0.09	0.0-2.9	0.5-2.0	.05	.43			
	10-14	---	---	0.00-0.01	---	---	---	---	---			
Belsac-----	0-21	18-25	1.05-1.20	4.00-14.00	0.05-0.11	0.0-2.9	3.0-5.0	.10	.32	3	7	38
	21-35	18-25	1.15-1.30	4.00-14.00	0.05-0.11	0.0-2.9	2.0-3.0	.10	.32			
	35-39	---	---	0.01-0.42	---	---	---	---	---			
0151: Hopeka-----	0-10	18-27	1.15-1.25	4.00-14.00	0.04-0.07	0.0-2.9	1.0-2.0	.20	.43	1	6	48
	10-14	---	---	0.00-0.01	---	---	---	---	---			
Amene-----	0-12	20-27	1.05-1.25	4.00-14.00	0.10-0.15	0.0-2.9	2.0-4.0	.17	.49	1	6	48
	12-18	18-27	1.10-1.30	4.00-14.00	0.06-0.13	0.0-2.9	0.5-2.0	.15	.43			
	18-22	---	---	0.00-0.01	---	---	---	---	---			
Rock Outcrop---	---	---	---	---	---	---	---	---	---	-	---	---
0154: Hopeka-----	0-10	18-27	1.15-1.25	4.00-14.00	0.04-0.07	0.0-2.9	1.0-2.0	.20	.43	1	6	48
	10-14	---	---	0.00-0.01	---	---	---	---	---			
Tecomar-----	0-2	18-27	1.30-1.45	4.00-14.00	0.04-0.08	0.0-2.9	1.0-2.0	.20	.64	1	8	0
	2-14	18-27	1.30-1.45	4.00-14.00	0.04-0.10	0.0-2.9	0.0-0.8	.10	.64			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
0160: Saltair-----	0-11	20-27	1.15-1.25	1.40-4.00	0.16-0.18	0.0-2.9	0.0-1.0	.49	.49	5	4L	86
	11-60	20-35	1.20-1.30	0.42-1.40	0.16-0.18	3.0-5.9	0.0-0.5	.49	.49			
Kawich-----	0-2	0-5	1.50-1.65	141.0-705.0	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15	5	1	250
	2-60	0-5	1.50-1.65	141.0-705.0	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
0161: Saltair-----	0-11	20-27	1.15-1.25	1.40-4.00	0.16-0.18	0.0-2.9	0.0-1.0	.49	.49	5	4L	86
	11-60	20-35	1.20-1.30	0.42-1.40	0.16-0.18	3.0-5.9	0.0-0.5	.49	.49			
Playas-----	0-6	35-70	---	0.01-0.42	0.02-0.04	6.0-8.9	0.0-0.1	.37	---	5	5	56
	6-60	35-70	---	0.01-0.42	0.02-0.04	6.0-8.9	---	.37	---			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
0171: Loray-----	0-12 12-60	10-15 0-8	1.55-1.65 1.50-1.65	14.00-42.00 141.0-705.0	0.07-0.09 0.03-0.05	0.0-2.9 0.0-2.9	0.5-1.0 0.0-0.5	.15 .05	.28 .20	2	4	86
Gravier-----	0-3 3-44 44-60	8-18 8-18 0-5	1.45-1.60 1.30-1.50 1.40-1.60	14.00-42.00 14.00-42.00 42.00-141.0	0.06-0.08 0.04-0.10 0.02-0.04	0.0-2.9 0.0-2.9 0.0-2.9	0.0-0.5 0.0-0.5 0.0-0.5	.10 .05 .05	.32 .28 .24	4	5	56
Toano-----	0-9 9-27 27-60	8-15 8-15 8-15	1.35-1.55 1.40-1.60 1.40-1.60	4.00-14.00 4.00-14.00 4.00-14.00	0.14-0.16 0.14-0.16 0.14-0.16	0.0-2.9 0.0-2.9 0.0-2.9	0.5-1.0 0.0-0.5 0.0-0.5	.55 .55 .55	.55 .55 .55	5	3	86
0173: Cliffdown-----	0-6 6-60	10-18 8-18	1.40-1.55 1.40-1.60	14.00-42.00 14.00-42.00	0.06-0.07 0.03-0.06	0.0-2.9 0.0-2.9	0.5-1.0 0.5-1.0	.10 .10	.32 .32	5	5	56
Arnespan-----	0-7 7-21 21-32 32-60	10-18 12-18 10-18 5-10	1.40-1.55 1.35-1.50 1.45-1.65 1.45-1.60	14.00-42.00 4.00-14.00 4.00-14.00 42.00-141.0	0.05-0.08 0.09-0.12 0.05-0.08 0.02-0.05	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	0.8-2.0 0.0-0.5 0.0-0.5 0.0-0.5	.10 .24 .10 .05	.32 .37 .24 .17	3	5	56
Izamatch-----	0-3 3-13 13-22 22-60	8-18 8-18 0-8 0-8	1.50-1.70 1.50-1.70 1.55-1.70 1.60-1.75	14.00-42.00 14.00-42.00 42.00-141.0 42.00-141.0	0.04-0.08 0.04-0.09 0.03-0.05 0.03-0.05	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	0.0-0.5 0.0-0.5 0.0-0.5 0.0-0.5	.10 .10 .10 .05	.37 .24 .20 .20	2	5	56
0174: Wintermute-----	0-3 3-15 15-53 53-60	8-18 8-18 8-18 27-35	1.35-1.55 1.40-1.60 1.45-1.65 1.40-1.60	4.00-14.00 4.00-14.00 0.42-1.40 0.42-1.40	0.12-0.18 0.10-0.16 0.03-0.07 0.12-0.18	0.0-2.9 0.0-2.9 0.0-2.9 3.0-5.9	0.0-0.8 0.0-0.5 0.0-0.5 0.0-0.5	.28 .28 .05 .17	.55 .49 .37 .55	3	5	56
Linoyer-----	0-9 9-60	12-18 12-18	1.30-1.50 1.30-1.50	4.00-14.00 4.00-14.00	0.16-0.18 0.15-0.18	0.0-2.9 0.0-2.9	0.5-1.0 0.5-1.0	.49 .49	.49 .49	5	4L	86
Okan-----	0-8 8-38 38-60	8-18 8-18 4-8	1.40-1.55 1.45-1.60 1.50-1.70	14.00-42.00 14.00-42.00 42.00-141.0	0.10-0.12 0.10-0.12 0.03-0.05	0.0-2.9 0.0-2.9 0.0-2.9	1.0-2.0 0.5-1.0 0.0-0.5	.20 .20 .05	.24 .24 .24	5	3	86
0175: Loray-----	0-12 12-60	10-15 0-8	1.55-1.65 1.50-1.65	14.00-42.00 141.0-705.0	0.07-0.09 0.03-0.05	0.0-2.9 0.0-2.9	0.5-1.0 0.0-0.5	.15 .05	.28 .20	2	4	86
Wintermute-----	0-3 3-15 15-53 53-60	8-18 8-18 8-18 27-35	1.35-1.55 1.40-1.60 1.45-1.65 1.40-1.60	4.00-14.00 4.00-14.00 0.42-1.40 0.42-1.40	0.12-0.18 0.10-0.16 0.03-0.07 0.12-0.18	0.0-2.9 0.0-2.9 0.0-2.9 3.0-5.9	0.0-0.8 0.0-0.5 0.0-0.5 0.0-0.5	.28 .28 .05 .17	.55 .49 .37 .55	3	5	56
0176: Loray-----	0-12 12-60	10-15 0-8	1.55-1.65 1.50-1.65	14.00-42.00 141.0-705.0	0.07-0.09 0.03-0.05	0.0-2.9 0.0-2.9	0.5-1.0 0.0-0.5	.15 .05	.28 .20	2	4	86
Zerk-----	0-2 2-16 16-60	12-17 12-17 0-10	1.30-1.50 1.35-1.55 1.50-1.65	14.00-42.00 14.00-42.00 42.00-141.0	0.13-0.15 0.11-0.13 0.03-0.05	0.0-2.9 0.0-2.9 0.0-2.9	0.5-1.0 0.0-0.5 0.0-0.5	.20 .17 .05	.32 .37 .17	2	5	56
Zerk-----	0-2 2-16 16-60	12-17 12-17 0-10	1.35-1.55 1.35-1.55 1.50-1.65	14.00-42.00 14.00-42.00 42.00-141.0	0.09-0.12 0.11-0.13 0.03-0.05	0.0-2.9 0.0-2.9 0.0-2.9	0.0-0.8 0.0-0.5 0.0-0.5	.17 .17 .05	.28 .37 .17	2	4	86
0181: Peeko-----	0-4 4-10 10-30	10-27 18-27 ---	1.35-1.55 1.40-1.60 ---	4.00-14.00 4.00-14.00 0.00-0.01	0.10-0.15 0.12-0.15 ---	0.0-2.9 3.0-5.9 ---	1.0-2.0 0.5-1.0 ---	.24 .24 ---	.43 .43 ---	1	5	56

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Dewar-----	0-3	18-25	1.15-1.25	4.00-14.00	0.13-0.17	3.0-5.9	1.0-2.0	.37	.43	1	7	38
	3-13	27-35	1.20-1.35	1.40-4.00	0.12-0.16	3.0-5.9	0.5-1.0	.37	.43			
	13-19	15-27	1.15-1.35	4.00-14.00	0.12-0.16	0.0-2.9	0.5-1.0	.43	.64			
	19-40	---	---	0.00-0.01	---	---	---	---	---			
Peeko-----	0-4	10-27	1.35-1.55	4.00-14.00	0.10-0.15	0.0-2.9	1.0-2.0	.24	.43	1	5	56
	4-10	18-27	1.40-1.60	4.00-14.00	0.12-0.15	3.0-5.9	0.5-1.0	.24	.43			
	10-30	---	---	0.00-0.01	---	---	---	---	---			
0182: Peeko-----	0-4	18-27	1.30-1.50	4.00-14.00	0.18-0.20	3.0-5.9	1.0-2.0	.32	.43	1	4L	86
	4-10	18-27	1.40-1.60	4.00-14.00	0.12-0.15	3.0-5.9	0.5-1.0	.24	.43			
	10-30	---	---	0.00-0.01	---	---	---	---	---			
Peeko-----	0-4	18-27	1.30-1.50	4.00-14.00	0.18-0.20	3.0-5.9	1.0-2.0	.32	.43	1	4L	86
	4-10	18-27	1.40-1.60	4.00-14.00	0.12-0.15	3.0-5.9	0.5-1.0	.24	.43			
	10-30	---	---	0.00-0.01	---	---	---	---	---			
Gance-----	0-5	20-25	1.35-1.55	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	5	7	38
	5-20	35-55	1.35-1.50	0.42-1.40	0.04-0.10	3.0-5.9	0.0-0.5	.10	.37			
	20-60	10-20	1.50-1.70	1.40-14.00	0.02-0.11	0.0-2.9	0.0-0.5	.05	.32			
0183: Peeko-----	0-4	10-27	1.35-1.55	4.00-14.00	0.10-0.15	0.0-2.9	1.0-2.0	.24	.43	1	5	56
	4-10	18-27	1.40-1.60	4.00-14.00	0.12-0.15	3.0-5.9	0.5-1.0	.24	.43			
	10-30	---	---	0.00-0.01	---	---	---	---	---			
Enko-----	0-2	10-18	1.35-1.45	14.00-42.00	0.11-0.15	0.0-2.9	1.0-2.0	.43	.49	5	3	86
	2-14	10-18	1.40-1.50	14.00-42.00	0.12-0.17	0.0-2.9	0.5-1.0	.43	.49			
	14-32	10-18	1.65-1.70	0.42-1.40	0.10-0.13	0.0-2.9	0.0-0.5	.37	.43			
	32-60	10-18	1.40-1.50	4.00-14.00	0.12-0.17	0.0-2.9	0.0-0.5	.43	.49			
Izar-----	0-3	18-25	1.15-1.25	4.00-14.00	0.07-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	3-12	18-25	1.20-1.30	4.00-14.00	0.05-0.11	0.0-2.9	0.0-1.0	.10	.43			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
0185: Peeko-----	0-4	18-27	1.30-1.50	4.00-14.00	0.18-0.20	3.0-5.9	1.0-2.0	.32	.43	1	4L	86
	0-4	18-27	1.30-1.50	4.00-14.00	0.18-0.20	3.0-5.9	1.0-2.0	.32	.43			
	4-10	18-27	1.40-1.60	4.00-14.00	0.12-0.15	3.0-5.9	0.5-1.0	.24	.43			
	4-10	18-27	1.40-1.60	4.00-14.00	0.12-0.15	3.0-5.9	0.5-1.0	.24	.43			
	10-30	---	---	0.00-0.01	---	---	---	---	---			
	10-30	---	---	0.00-0.01	---	---	---	---	---			
Chiara-----	0-4	10-18	1.25-1.40	4.00-14.00	0.19-0.21	0.0-2.9	1.0-2.0	.55	.55	1	5	56
	4-11	10-18	1.35-1.55	4.00-14.00	0.16-0.19	0.0-2.9	0.5-1.0	.49	.49			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
0186: Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.10-0.15	0.0-2.9	1.0-2.0	.24	.43	1	5	56
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
Pharo-----	0-13	15-20	1.40-1.60	4.00-14.00	0.11-0.14	0.0-2.9	2.0-4.0	.20	.32	2	5	56
	13-36	10-20	1.50-1.65	4.00-14.00	0.05-0.09	0.0-2.9	0.5-1.0	.10	.28			
	36-60	2-8	1.60-1.75	141.0-705.0	0.01-0.02	0.0-2.9	0.0-0.5	.02	.10			
Hundraw-----	0-5	8-18	1.40-1.55	14.00-42.00	0.10-0.13	0.0-2.9	0.5-1.0	.15	.28	1	4	86
	5-10	8-18	1.40-1.55	4.00-14.00	0.12-0.17	0.0-2.9	0.0-0.5	.20	.32			
	10-14	---	---	0.01-0.42	---	---	---	---	---			
0187: Peeko-----	0-4	10-27	1.35-1.55	4.00-14.00	0.10-0.15	0.0-2.9	1.0-2.0	.24	.43	1	5	56
	4-10	18-27	1.40-1.60	4.00-14.00	0.12-0.15	3.0-5.9	0.5-1.0	.24	.43			
	10-30	---	---	0.00-0.01	---	---	---	---	---			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Izar-----	0-1	18-25	1.15-1.25	4.00-14.00	0.07-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	1-10	18-25	1.20-1.30	4.00-14.00	0.05-0.11	0.0-2.9	0.0-1.0	.10	.43			
	10-14	---	---	0.00-0.01	---	---	---	---	---			
Izar-----	0-3	18-25	1.15-1.25	4.00-14.00	0.07-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	3-12	18-25	1.20-1.30	4.00-14.00	0.05-0.11	0.0-2.9	0.0-1.0	.10	.43			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
0188: Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
Automal-----	0-8	15-25	1.30-1.50	4.00-14.00	0.14-0.18	0.0-2.9	1.0-2.0	.20	.55	5	5	56
	8-49	10-20	1.40-1.60	0.42-1.40	0.04-0.06	0.0-2.9	0.0-1.0	.02	.37			
	49-60	5-15	1.50-1.70	0.42-1.40	0.03-0.05	0.0-2.9	0.0-0.1	.02	.10			
Izar-----	0-1	18-25	1.15-1.25	4.00-14.00	0.07-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	1-10	18-25	1.20-1.30	4.00-14.00	0.05-0.11	0.0-2.9	0.0-1.0	.10	.43			
	10-14	---	---	0.00-0.01	---	---	---	---	---			
0192: Hutchley-----	0-4	12-25	1.15-1.25	4.00-14.00	0.09-0.12	0.0-2.9	2.0-3.0	.10	.28	1	7	38
	4-13	28-35	1.40-1.50	1.40-4.00	0.09-0.11	3.0-5.9	1.0-2.0	.10	.43			
	13-17	---	---	0.00-0.01	---	---	---	---	---			
Simon-----	0-10	10-20	1.20-1.40	4.00-14.00	0.17-0.19	0.0-2.9	2.0-4.0	.37	.43	4	5	56
	10-15	18-35	1.25-1.45	1.40-4.00	0.17-0.20	3.0-5.9	0.5-2.0	.37	.49			
	15-47	35-45	1.25-1.40	1.40-4.00	0.16-0.19	6.0-8.9	0.5-1.0	.20	.37			
	47-60	20-35	1.35-1.55	4.00-14.00	0.08-0.10	0.0-2.9	0.0-0.5	.05	.32			
0201: Tecomar-----	0-2	18-27	1.30-1.45	4.00-14.00	0.04-0.08	0.0-2.9	1.0-2.0	.20	.64	1	8	0
	2-14	18-27	1.30-1.45	4.00-14.00	0.04-0.10	0.0-2.9	0.0-0.8	.10	.64			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
Hopeka-----	0-10	18-27	1.15-1.25	4.00-14.00	0.04-0.07	0.0-2.9	1.0-2.0	.20	.43	1	6	48
	10-14	---	---	0.00-0.01	---	---	---	---	---			
Rock Outcrop----	---	---	---	---	---	---	---	---	---	-	---	---
0203: Tecomar-----	0-2	18-27	1.30-1.45	4.00-14.00	0.03-0.06	0.0-2.9	1.0-2.0	.17	.43	1	8	0
	2-14	20-27	1.30-1.45	4.00-14.00	0.04-0.09	0.0-2.9	0.0-0.8	.10	.64			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
Pookalco-----	0-2	10-18	1.20-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.20	.43	1	6	48
	2-14	10-18	1.35-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.0-0.5	.20	.55			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
Pharo-----	0-13	15-20	1.40-1.60	4.00-14.00	0.11-0.14	0.0-2.9	2.0-4.0	.20	.32	2	5	56
	13-36	10-20	1.50-1.65	4.00-14.00	0.05-0.09	0.0-2.9	0.5-1.0	.10	.28			
	36-60	2-8	1.60-1.75	141.0-705.0	0.01-0.02	0.0-2.9	0.0-0.5	.02	.10			
0210: Mazuma-----	0-15	10-14	1.40-1.55	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43	5	4L	86
	15-60	5-15	1.45-1.65	14.00-42.00	0.10-0.14	0.0-2.9	0.0-0.5	.24	.28			
Hardhat-----	0-9	8-18	1.30-1.50	4.00-14.00	0.18-0.20	0.0-2.9	0.5-1.0	.43	.49	5	4L	86
	9-19	8-18	1.20-1.40	4.00-14.00	0.15-0.19	0.0-2.9	0.0-0.5	.43	.49			
	19-40	5-15	1.50-1.70	1.40-4.00	0.11-0.16	0.0-2.9	0.0-0.5	.32	.49			
	40-60	5-15	1.50-1.70	1.40-4.00	0.05-0.11	0.0-2.9	0.0-0.5	.17	.32			
Loray-----	0-12	10-15	1.55-1.65	14.00-42.00	0.07-0.09	0.0-2.9	0.5-1.0	.15	.28	2	4	86
	12-60	0-8	1.50-1.65	141.0-705.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
0211: Valmy-----	0-9	18-27	1.30-1.50	4.00-14.00	0.18-0.21	3.0-5.9	0.5-1.0	.43	.43	5	4L	86
	9-40	5-15	1.45-1.65	14.00-42.00	0.12-0.15	0.0-2.9	0.0-0.8	.32	.32			
	40-61	5-18	1.45-1.65	4.00-14.00	0.14-0.18	0.0-2.9	0.0-0.5	.49	.49			
Enko-----	0-2	10-18	1.35-1.45	14.00-42.00	0.11-0.15	0.0-2.9	1.0-2.0	.43	.49	5	3	86
	2-14	10-18	1.40-1.50	14.00-42.00	0.12-0.17	0.0-2.9	0.5-1.0	.43	.49			
	14-32	10-18	1.65-1.70	0.42-1.40	0.10-0.13	0.0-2.9	0.0-0.5	.37	.43			
	32-60	10-18	1.40-1.50	4.00-14.00	0.12-0.17	0.0-2.9	0.0-0.5	.43	.49			
0230: Zafod-----	0-7	15-20	1.30-1.50	4.00-14.00	0.07-0.10	0.0-2.9	1.0-2.0	.05	.43	3	8	0
	7-28	5-15	1.50-1.70	42.00-141.0	0.04-0.07	0.0-2.9	0.5-1.0	.10	.20			
	28-38	---	---	0.42-1.40	---	---	---	---	---			
	38-60	2-8	1.60-1.80	42.00-141.0	0.02-0.03	0.0-2.9	0.0-0.5	.02	.10			
Pyrat-----	0-6	10-18	1.40-1.60	14.00-42.00	0.06-0.09	0.0-2.9	1.0-2.0	.05	.37	3	5	56
	6-14	10-18	1.45-1.65	14.00-42.00	0.05-0.08	0.0-2.9	0.5-1.0	.10	.37			
	14-21	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.5-1.0	.15	.43			
	21-42	10-18	1.50-1.70	14.00-42.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.37			
	42-60	5-10	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
0231: Dacker-----	0-6	15-25	1.30-1.50	4.00-14.00	0.18-0.20	0.0-2.9	1.0-2.0	.43	.49	2	6	48
	6-11	27-35	1.25-1.45	1.40-4.00	0.16-0.19	3.0-5.9	0.5-1.0	.37	.49			
	11-18	25-33	1.25-1.45	1.40-4.00	0.11-0.15	3.0-5.9	0.0-0.5	.49	.64			
	18-24	18-25	1.25-1.45	4.00-14.00	0.09-0.19	0.0-2.9	0.0-0.1	.49	.64			
	24-49	---	---	0.00-0.01	---	---	---	---	---			
Nevador-----	0-3	8-18	1.35-1.50	1.40-4.00	0.14-0.16	0.0-2.9	1.0-2.0	.43	.43	5	5	56
	3-13	25-35	1.30-1.50	1.40-4.00	0.14-0.16	3.0-5.9	0.5-1.0	.32	.43			
	13-60	5-15	1.40-1.60	14.00-42.00	0.11-0.13	0.0-2.9	0.0-0.5	.24	.24			
Kelk-----	0-12	18-27	1.15-1.30	4.00-14.00	0.19-0.21	3.0-5.9	1.0-2.0	.55	.55	5	6	48
	12-20	18-27	1.40-1.60	0.42-1.40	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	20-60	18-27	1.40-1.60	4.00-14.00	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
0240: Hundraw-----	0-5	8-18	1.40-1.55	4.00-14.00	0.11-0.14	0.0-2.9	0.5-1.0	.17	.43	1	5	56
	5-10	8-18	1.40-1.55	4.00-14.00	0.12-0.17	0.0-2.9	0.0-0.5	.20	.32			
	10-14	---	---	0.01-0.42	---	---	---	---	---			
Cobra-----	0-7	15-25	1.10-1.25	4.00-14.00	0.21-0.28	3.0-5.9	1.0-2.0	.43	.49	3	6	48
	7-15	15-25	1.15-1.30	4.00-14.00	0.19-0.28	3.0-5.9	0.5-1.0	.37	.43			
	15-34	8-18	1.15-1.30	4.00-14.00	0.17-0.25	0.0-2.9	0.0-0.5	.37	.43			
	34-38	---	---	0.01-0.42	---	---	---	---	---			
0241: Hundraw-----	0-5	8-18	1.40-1.55	14.00-42.00	0.10-0.13	0.0-2.9	0.5-1.0	.15	.28	1	4	86
	5-10	8-18	1.40-1.55	4.00-14.00	0.12-0.17	0.0-2.9	0.0-0.5	.20	.32			
	10-14	---	---	0.01-0.42	---	---	---	---	---			
Peeko-----	0-4	10-27	1.35-1.55	4.00-14.00	0.10-0.15	0.0-2.9	1.0-2.0	.24	.43	1	5	56
	4-10	18-27	1.40-1.60	4.00-14.00	0.12-0.15	3.0-5.9	0.5-1.0	.24	.43			
	10-30	---	---	0.00-0.01	---	---	---	---	---			
Kzin-----	0-3	15-25	1.25-1.45	4.00-14.00	0.09-0.11	0.0-2.9	2.0-3.0	.15	.49	1	6	48
	3-9	15-25	1.30-1.50	4.00-14.00	0.06-0.09	0.0-2.9	0.5-2.0	.15	.49			
	9-13	---	---	0.01-0.42	---	---	---	---	---			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
0242: Cobre-----	0-7 7-15 15-34 34-38	15-25 15-25 8-18 ---	1.10-1.25 1.15-1.30 1.15-1.30 ---	4.00-14.00 4.00-14.00 4.00-14.00 0.01-0.42	0.21-0.28 0.19-0.28 0.17-0.25 ---	3.0-5.9 3.0-5.9 0.0-2.9 ---	1.0-2.0 0.5-1.0 0.0-0.5 ---	.43 .37 .37 ---	.49 .43 .43 ---	3 ---	6	48
Hundraw-----	0-5 5-10 10-14	8-18 8-18 ---	1.40-1.55 1.40-1.55 ---	14.00-42.00 4.00-14.00 0.01-0.42	0.10-0.13 0.12-0.17 ---	0.0-2.9 0.0-2.9 ---	0.5-1.0 0.0-0.5 ---	.15 .20 ---	.28 .32 ---	1 ---	4	86
Chiara-----	0-4 4-11 11-15	10-18 10-18 ---	1.25-1.40 1.35-1.55 ---	4.00-14.00 4.00-14.00 0.00-0.01	0.19-0.21 0.16-0.19 ---	0.0-2.9 0.0-2.9 ---	1.0-2.0 0.5-1.0 ---	.55 .49 ---	.55 .49 ---	1 ---	5	56
0244: Hundraw-----	0-5 5-10 10-14	8-18 8-18 ---	1.40-1.55 1.40-1.55 ---	14.00-42.00 4.00-14.00 0.01-0.42	0.10-0.13 0.12-0.17 ---	0.0-2.9 0.0-2.9 ---	0.5-1.0 0.0-0.5 ---	.15 .20 ---	.28 .32 ---	1 ---	4	86
Shabliss-----	0-2 2-15 15-31 31-60	10-18 5-15 --- 0-5	1.40-1.55 1.35-1.55 --- 1.50-1.65	14.00-42.00 4.00-14.00 0.01-0.42 42.00-141.0	0.09-0.12 0.15-0.17 --- 0.03-0.05	0.0-2.9 0.0-2.9 --- 0.0-2.9	1.0-2.0 0.5-1.0 --- 0.0-0.5	.20 .55 --- .05	.43 .55 --- .20	2 ---	4	86
Palinor-----	0-8 8-16 16-34 34-60	10-18 10-18 --- 2-8	1.30-1.50 1.40-1.60 --- 1.50-1.70	4.00-14.00 4.00-14.00 0.00-0.01 42.00-141.0	0.10-0.15 0.04-0.09 --- 0.03-0.08	0.0-2.9 0.0-2.9 --- 0.0-2.9	1.0-2.0 0.5-1.0 --- 0.0-0.5	.24 .10 --- .05	.43 .49 --- .24	1 ---	5	56
0250: Izar-----	0-3 3-12 12-16	18-25 18-25 ---	1.15-1.25 1.20-1.30 ---	4.00-14.00 4.00-14.00 0.00-0.01	0.07-0.11 0.05-0.11 ---	0.0-2.9 0.0-2.9 ---	1.0-2.0 0.0-1.0 ---	.15 .10 ---	.55 .43 ---	1 ---	6	48
Holborn-----	0-3 3-7 7-17	18-27 18-30 ---	1.30-1.50 1.25-1.45 ---	4.00-14.00 1.40-4.00 0.01-0.42	0.11-0.15 0.11-0.17 ---	3.0-5.9 3.0-5.9 ---	1.0-2.0 0.5-1.0 ---	.17 .20 ---	.32 .37 ---	1 ---	5	56
Kzin-----	0-3 3-9 9-13	15-25 15-25 ---	1.25-1.45 1.30-1.50 ---	4.00-14.00 4.00-14.00 0.01-0.42	0.09-0.11 0.06-0.09 ---	0.0-2.9 0.0-2.9 ---	2.0-3.0 0.5-2.0 ---	.15 .15 ---	.49 .49 ---	1 ---	6	48
0251: Izar-----	0-3 3-12 12-16	18-25 18-25 ---	1.15-1.25 1.20-1.30 ---	4.00-14.00 4.00-14.00 0.00-0.01	0.07-0.11 0.05-0.11 ---	0.0-2.9 0.0-2.9 ---	1.0-2.0 0.0-1.0 ---	.15 .10 ---	.55 .43 ---	1 ---	6	48
Palinor-----	0-8 8-16 16-34 34-60	10-18 10-18 --- 2-8	1.30-1.50 1.40-1.60 --- 1.50-1.70	4.00-14.00 4.00-14.00 0.00-0.01 42.00-141.0	0.05-0.11 0.04-0.09 --- 0.03-0.08	0.0-2.9 0.0-2.9 --- 0.0-2.9	1.0-2.0 0.5-1.0 --- 0.0-0.5	.15 .10 --- .05	.55 .49 --- .24	1 ---	6	48
Shabliss-----	0-2 2-15 15-31 31-60	10-18 5-15 --- 0-5	1.40-1.55 1.35-1.55 --- 1.50-1.65	14.00-42.00 4.00-14.00 0.01-0.42 42.00-141.0	0.09-0.12 0.15-0.17 --- 0.03-0.05	0.0-2.9 0.0-2.9 --- 0.0-2.9	1.0-2.0 0.5-1.0 --- 0.0-0.5	.20 .55 --- .05	.43 .55 --- .20	2 ---	4	86
0252: Izar-----	0-3 3-12 12-16	18-25 18-25 ---	1.15-1.25 1.20-1.30 ---	4.00-14.00 4.00-14.00 0.00-0.01	0.07-0.11 0.05-0.11 ---	0.0-2.9 0.0-2.9 ---	1.0-2.0 0.0-1.0 ---	.15 .10 ---	.55 .43 ---	1 ---	6	48
Hundraw-----	0-5 5-10 10-14	8-18 8-18 ---	1.40-1.55 1.40-1.55 ---	14.00-42.00 4.00-14.00 0.01-0.42	0.10-0.13 0.12-0.17 ---	0.0-2.9 0.0-2.9 ---	0.5-1.0 0.0-0.5 ---	.15 .20 ---	.28 .32 ---	1 ---	4	86

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
0260:												
Dewar-----	0-3	18-25	1.15-1.25	4.00-14.00	0.13-0.17	3.0-5.9	1.0-2.0	.37	.43	1	7	38
	3-13	27-35	1.20-1.35	1.40-4.00	0.12-0.16	3.0-5.9	0.5-1.0	.37	.43			
	13-19	15-27	1.15-1.35	4.00-14.00	0.12-0.16	0.0-2.9	0.5-1.0	.43	.64			
	19-40	---	---	0.00-0.01	---	---	---	---	---			
Chiara-----	0-4	10-18	1.25-1.40	4.00-14.00	0.19-0.21	0.0-2.9	1.0-2.0	.55	.55	1	5	56
	4-11	10-18	1.35-1.55	4.00-14.00	0.16-0.19	0.0-2.9	0.5-1.0	.49	.49			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Hunnton-----	0-8	10-25	1.20-1.25	4.00-14.00	0.14-0.18	0.0-2.9	1.0-2.0	.49	.55	2	5	56
	8-12	20-30	1.50-1.55	1.40-4.00	0.15-0.21	3.0-5.9	0.5-2.0	.49	.49			
	12-21	45-55	1.20-1.25	0.42-1.40	0.10-0.16	6.0-8.9	0.5-1.0	.28	.37			
	21-40	---	---	0.00-0.01	---	---	---	---	---			
0270:												
Chiara-----	0-4	10-18	1.25-1.40	4.00-14.00	0.19-0.21	0.0-2.9	1.0-2.0	.55	.55	1	5	56
	4-11	10-18	1.35-1.55	4.00-14.00	0.16-0.19	0.0-2.9	0.5-1.0	.49	.49			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Kelk-----	0-12	18-27	1.15-1.30	4.00-14.00	0.19-0.21	3.0-5.9	1.0-2.0	.55	.55	5	6	48
	12-20	18-27	1.40-1.60	0.42-1.40	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	20-60	18-27	1.40-1.60	4.00-14.00	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
Kelk-----	0-12	18-27	1.15-1.30	4.00-14.00	0.19-0.21	3.0-5.9	1.0-2.0	.55	.55	5	6	48
	12-20	18-27	1.40-1.60	0.42-1.40	0.19-0.21	3.0-5.9	0.5-1.0	.49	.49			
	20-60	18-27	1.40-1.60	4.00-14.00	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
0273:												
Chiara-----	0-4	10-18	1.25-1.40	4.00-14.00	0.19-0.21	0.0-2.9	1.0-2.0	.55	.55	1	5	56
	4-11	10-18	1.35-1.55	4.00-14.00	0.16-0.19	0.0-2.9	0.5-1.0	.49	.49			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Dewar-----	0-3	18-25	1.15-1.25	4.00-14.00	0.13-0.17	3.0-5.9	1.0-2.0	.37	.43	1	7	38
	3-13	27-35	1.20-1.35	1.40-4.00	0.12-0.16	3.0-5.9	0.5-1.0	.37	.43			
	13-19	15-27	1.15-1.35	4.00-14.00	0.12-0.16	0.0-2.9	0.5-1.0	.43	.64			
	19-40	---	---	0.00-0.01	---	---	---	---	---			
Enko-----	0-2	10-18	1.35-1.45	14.00-42.00	0.11-0.15	0.0-2.9	1.0-2.0	.43	.49	5	3	86
	2-14	10-18	1.40-1.50	14.00-42.00	0.12-0.17	0.0-2.9	0.5-1.0	.43	.49			
	14-32	10-18	1.65-1.70	0.42-1.40	0.10-0.13	0.0-2.9	0.0-0.5	.37	.43			
	32-60	10-18	1.40-1.50	4.00-14.00	0.12-0.17	0.0-2.9	0.0-0.5	.43	.49			
0276:												
Chiara-----	0-4	10-18	1.25-1.40	4.00-14.00	0.19-0.21	0.0-2.9	1.0-2.0	.55	.55	1	5	56
	4-11	10-18	1.35-1.55	4.00-14.00	0.16-0.19	0.0-2.9	0.5-1.0	.49	.49			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Peeko-----	0-4	10-27	1.35-1.55	4.00-14.00	0.10-0.15	0.0-2.9	1.0-2.0	.24	.43	1	5	56
	4-10	18-27	1.40-1.60	4.00-14.00	0.12-0.15	3.0-5.9	0.5-1.0	.24	.43			
	10-30	---	---	0.00-0.01	---	---	---	---	---			
Urmafot-----	0-7	18-27	1.25-1.45	4.00-14.00	0.10-0.15	3.0-5.9	2.0-4.0	.20	.37	1	5	56
	7-16	18-27	1.35-1.55	4.00-14.00	0.10-0.15	3.0-5.9	1.0-2.0	.20	.37			
	16-29	---	---	0.00-0.01	---	---	---	---	---			
	29-60	5-15	1.50-1.70	14.00-42.00	0.03-0.06	0.0-2.9	0.0-0.8	.02	.17			
0279:												
Chiara-----	0-4	10-18	1.25-1.40	4.00-14.00	0.19-0.21	0.0-2.9	1.0-2.0	.55	.55	1	5	56
	4-11	10-18	1.35-1.55	4.00-14.00	0.16-0.19	0.0-2.9	0.5-1.0	.49	.49			
	11-15	---	---	0.00-0.01	---	---	---	---	---			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
Parisa-----	0-5	8-18	1.50-1.65	4.00-14.00	0.10-0.15	0.0-2.9	1.0-2.0	.20	.37	2	5	56
	5-36	8-18	1.50-1.70	4.00-14.00	0.04-0.12	0.0-2.9	0.5-1.0	.10	.37			
	36-55	---	---	0.00-0.01	---	---	---	---	---			
	55-60	0-8	1.60-1.75	42.00-141.0	0.03-0.11	0.0-2.9	0.0-0.5	.02	.15			
Enko-----	0-2	10-18	1.35-1.45	4.00-14.00	0.14-0.18	0.0-2.9	1.0-2.0	.43	.49	5	5	56
	2-14	10-18	1.40-1.50	14.00-42.00	0.12-0.17	0.0-2.9	0.5-1.0	.43	.49			
	14-32	10-18	1.55-1.65	4.00-14.00	0.12-0.17	0.0-2.9	0.0-0.5	.43	.49			
	32-60	10-18	1.65-1.70	0.42-1.40	0.10-0.13	0.0-2.9	0.0-0.5	.37	.43			
0280: Oupico-----	0-4	10-15	1.35-1.50	4.00-14.00	0.16-0.18	0.0-2.9	1.0-2.0	.32	.32	2	4L	86
	4-25	8-18	1.40-1.60	4.00-14.00	0.13-0.15	0.0-2.9	0.0-0.5	.24	.37			
	25-49	---	---	0.00-0.01	---	---	---	---	---			
	49-62	5-10	1.55-1.75	1.40-4.00	0.12-0.14	0.0-2.9	0.0-0.5	.32	.37			
Enko-----	0-14	10-18	1.35-1.50	4.00-14.00	0.16-0.18	0.0-2.9	1.0-2.0	.37	.37	4	5	56
	14-53	10-18	1.45-1.65	0.42-1.40	0.12-0.18	0.0-2.9	0.0-0.5	.37	.37			
	53-63	2-10	1.55-1.75	141.0-705.0	0.03-0.04	0.0-2.9	0.0-0.5	.05	.24			
0282: Shabliss-----	0-2	10-18	1.40-1.55	14.00-42.00	0.09-0.12	0.0-2.9	1.0-2.0	.20	.43	2	4	86
	2-15	5-15	1.35-1.55	4.00-14.00	0.15-0.17	0.0-2.9	0.5-1.0	.55	.55			
	15-31	---	---	0.01-0.42	---	---	---	---	---			
	31-60	0-5	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
Pyrat-----	0-6	12-20	1.40-1.60	14.00-42.00	0.08-0.10	0.0-2.9	1.0-2.0	.15	.28	3	4	86
	6-14	10-18	1.45-1.65	14.00-42.00	0.05-0.08	0.0-2.9	0.5-1.0	.10	.37			
	14-21	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.15	.49			
	21-42	10-18	1.50-1.70	14.00-42.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.37			
	42-60	5-10	1.45-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
0310: Sonoma-----	0-6	27-35	1.35-1.50	1.40-4.00	0.19-0.21	3.0-5.9	1.0-2.0	.43	.43	5	4L	86
	6-48	20-35	1.35-1.55	1.40-4.00	0.19-0.21	3.0-5.9	0.5-1.0	.24	.24			
	48-60	40-50	1.35-1.50	0.42-1.40	0.14-0.17	6.0-8.9	0.5-1.0	.28	.28			
Devilsgait-----	0-8	15-25	1.20-1.30	4.00-14.00	0.19-0.21	3.0-5.9	2.0-4.0	.37	.37	5	4L	86
	8-43	20-35	1.25-1.35	1.40-4.00	0.19-0.21	3.0-5.9	1.0-3.0	.32	.32			
	43-68	15-25	1.20-1.25	14.00-42.00	0.13-0.15	3.0-5.9	0.5-1.0	.28	.28			
Sonoma-----	0-6	20-27	1.35-1.50	4.00-14.00	0.19-0.21	3.0-5.9	1.0-2.0	.43	.43	5	4L	86
	6-60	25-35	1.35-1.50	1.40-4.00	0.19-0.21	3.0-5.9	0.5-2.0	.37	.37			
0311: Sonoma-----	0-8	20-27	1.35-1.50	4.00-14.00	0.18-0.21	3.0-5.9	0.6-2.0	.43	.43	5	4L	86
	8-60	25-35	1.35-1.50	1.40-4.00	0.19-0.21	3.0-5.9	0.6-2.0	.37	.37			
Kelk-----	0-12	18-27	1.15-1.30	4.00-14.00	0.19-0.21	3.0-5.9	1.0-2.0	.55	.55	5	6	48
	12-20	18-27	1.40-1.60	0.42-1.40	0.19-0.21	3.0-5.9	0.5-1.0	.49	.49			
	20-60	18-27	1.40-1.60	4.00-14.00	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
0330: Kzin-----	0-3	15-25	1.25-1.45	4.00-14.00	0.09-0.11	0.0-2.9	2.0-3.0	.15	.49	1	6	48
	3-9	15-25	1.30-1.50	4.00-14.00	0.06-0.09	0.0-2.9	0.5-2.0	.15	.49			
	9-13	---	---	0.01-0.42	---	---	---	---	---			
Holborn-----	0-3	18-27	1.30-1.50	4.00-14.00	0.11-0.15	3.0-5.9	1.0-2.0	.17	.32	1	5	56
	3-7	18-30	1.25-1.45	1.40-4.00	0.11-0.17	3.0-5.9	0.5-1.0	.20	.37			
	7-17	---	---	0.01-0.42	---	---	---	---	---			
Kzin-----	0-3	15-25	1.25-1.45	4.00-14.00	0.09-0.11	0.0-2.9	2.0-3.0	.15	.49	1	6	48
	3-9	15-25	1.30-1.50	4.00-14.00	0.06-0.09	0.0-2.9	0.5-2.0	.15	.49			
	9-13	---	---	0.01-0.42	---	---	---	---	---			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
0331: Kzin-----	0-3	15-25	1.25-1.45	4.00-14.00	0.09-0.11	0.0-2.9	2.0-3.0	.15	.49	1	6	48
	3-9	15-25	1.30-1.50	4.00-14.00	0.06-0.09	0.0-2.9	0.5-2.0	.15	.49			
	9-13	---	---	0.01-0.42	---	---	---	---	---			
Cobre-----	0-7	15-25	1.10-1.25	4.00-14.00	0.21-0.28	3.0-5.9	1.0-2.0	.43	.49	3	6	48
	7-15	15-25	1.15-1.30	4.00-14.00	0.19-0.28	3.0-5.9	0.5-1.0	.37	.43			
	15-34	8-18	1.15-1.30	4.00-14.00	0.17-0.25	0.0-2.9	0.0-0.5	.37	.43			
	34-38	---	---	0.01-0.42	---	---	---	---	---			
Jackpot-----	0-4	5-10	0.80-1.00	1.40-4.00	0.25-0.50	0.0-2.9	2.0-3.0	.20	.24	2	3	86
	4-11	5-10	0.80-1.00	1.40-4.00	0.25-0.50	0.0-2.9	0.5-2.0	.20	.24			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
0333: Kzin-----	0-3	15-25	1.25-1.45	4.00-14.00	0.09-0.11	0.0-2.9	2.0-3.0	.15	.49	1	6	48
	3-8	15-25	1.30-1.50	4.00-14.00	0.06-0.09	0.0-2.9	0.5-2.0	.15	.49			
	8-12	---	---	0.01-0.42	---	---	---	---	---			
Holborn-----	0-3	18-27	1.30-1.50	4.00-14.00	0.11-0.15	3.0-5.9	1.0-2.0	.17	.32	1	5	56
	3-7	18-30	1.25-1.45	1.40-4.00	0.11-0.17	3.0-5.9	0.5-1.0	.20	.37			
	7-17	---	---	0.01-0.42	---	---	---	---	---			
Onkeyo-----	0-8	18-27	1.10-1.30	4.00-14.00	0.06-0.13	0.0-2.9	2.0-4.0	.10	.55	1	6	48
	8-17	25-35	1.20-1.40	1.40-4.00	0.04-0.10	0.0-2.9	0.5-1.0	.05	.43			
	17-21	---	---	0.00-0.01	---	---	---	---	---			
0340: Shuttle-----	0-6	8-18	1.30-1.45	4.00-14.00	0.18-0.20	0.0-2.9	0.5-1.0	.55	.64	3	4L	86
	6-19	8-18	1.30-1.50	4.00-14.00	0.15-0.19	0.0-2.9	0.0-0.8	.55	.64			
	19-45	5-15	1.50-1.70	1.40-4.00	0.14-0.18	0.0-2.9	0.0-0.5	.55	.64			
	45-60	---	---	0.00-0.01	---	---	---	---	---			
Hardhat-----	0-9	8-18	1.30-1.50	4.00-14.00	0.18-0.20	0.0-2.9	0.5-1.0	.43	.49	5	4L	86
	9-19	8-18	1.20-1.40	4.00-14.00	0.15-0.19	0.0-2.9	0.0-0.5	.43	.49			
	19-40	5-15	1.50-1.70	1.40-4.00	0.11-0.16	0.0-2.9	0.0-0.5	.32	.49			
	40-60	5-15	1.50-1.70	1.40-4.00	0.05-0.11	0.0-2.9	0.0-0.5	.17	.32			
Shuttle-----	0-5	8-15	1.30-1.45	4.00-14.00	0.18-0.20	0.0-2.9	0.5-1.0	.55	.64	5	4L	86
	5-15	8-18	1.30-1.50	4.00-14.00	0.15-0.19	0.0-2.9	0.0-0.8	.55	.64			
	15-42	5-15	1.50-1.70	1.40-4.00	0.13-0.17	0.0-2.9	0.0-0.5	.55	.64			
	42-61	5-15	1.40-1.60	4.00-14.00	0.07-0.13	0.0-2.9	0.0-0.3	.17	.32			
0350: Jericho-----	0-4	10-18	0.14-1.60	14.00-42.00	0.08-0.11	0.0-2.9	1.0-2.0	.15	.32	1	4	86
	4-14	10-18	1.50-1.70	14.00-42.00	0.06-0.08	0.0-2.9	0.5-1.0	.05	.20			
	14-28	---	---	0.00-0.01	---	---	---	---	---			
	28-60	5-10	1.55-1.75	14.00-42.00	0.06-0.10	0.0-2.9	0.0-0.5	.10	.24			
Jericho-----	0-4	10-18	1.25-1.45	14.00-42.00	0.18-0.20	0.0-2.9	1.0-2.0	.37	.43	1	4L	86
	4-14	10-18	1.50-1.70	14.00-42.00	0.06-0.08	0.0-2.9	0.5-1.0	.05	.20			
	14-28	---	---	0.00-0.01	---	---	---	---	---			
	28-60	5-10	1.55-1.75	14.00-42.00	0.06-0.10	0.0-2.9	0.0-0.5	.10	.24			
0351: Shabliss-----	0-2	10-18	1.40-1.55	14.00-42.00	0.09-0.12	0.0-2.9	1.0-2.0	.20	.43	2	4	86
	2-15	5-15	1.35-1.55	4.00-14.00	0.15-0.17	0.0-2.9	0.5-1.0	.55	.55			
	15-31	---	---	0.01-0.42	---	---	---	---	---			
	31-60	0-5	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
Eastwell-----	0-5	10-18	1.25-1.40	14.00-42.00	0.13-0.15	0.0-2.9	1.0-2.0	.24	.43	2	4	86
	5-18	10-27	1.30-1.50	4.00-14.00	0.08-0.11	0.0-2.9	0.5-2.0	.24	.32			
	18-27	---	---	0.42-1.40	---	---	---	---	---			
	27-60	10-20	1.35-1.55	14.00-42.00	0.08-0.11	0.0-2.9	0.0-0.5	.24	.43			
0355:												
Shabliss-----	0-2	10-18	1.40-1.55	14.00-42.00	0.09-0.12	0.0-2.9	1.0-2.0	.20	.43	2	4	86
	2-15	5-15	1.35-1.55	4.00-14.00	0.15-0.17	0.0-2.9	0.5-1.0	.55	.55			
	15-31	---	---	0.01-0.42	---	---	---	---	---			
	31-60	0-5	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
0370:												
Toano-----	0-9	8-15	1.35-1.55	4.00-14.00	0.14-0.16	0.0-2.9	0.5-1.0	.64	.64	5	4L	86
	9-27	8-15	1.40-1.60	4.00-14.00	0.14-0.16	0.0-2.9	0.0-0.5	.55	.55			
	27-60	8-15	1.40-1.60	4.00-14.00	0.14-0.16	0.0-2.9	0.0-0.5	.55	.55			
Tulase-----	0-2	8-18	1.35-1.50	4.00-14.00	0.15-0.17	0.0-2.9	1.0-2.0	.43	.43	5	3	86
	2-60	8-18	1.30-1.50	4.00-14.00	0.15-0.21	0.0-2.9	0.5-2.0	.55	.55			
0371:												
Lincoyer-----	0-9	12-18	1.30-1.50	4.00-14.00	0.16-0.18	0.0-2.9	0.5-1.0	.49	.49	5	4L	86
	9-60	12-18	1.30-1.50	4.00-14.00	0.15-0.18	0.0-2.9	0.5-1.0	.49	.49			
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
0373:												
Timpie-----	0-8	18-27	1.15-1.30	1.40-4.00	0.16-0.18	0.0-2.9	0.5-1.0	.43	.43	5	4L	86
	8-19	18-27	1.15-1.30	1.40-4.00	0.15-0.17	0.0-2.9	0.0-0.5	.49	.55			
	19-60	18-27	1.15-1.30	1.40-4.00	0.04-0.10	0.0-2.9	0.0-0.5	.55	.55			
Piltown-----	0-10	10-18	1.50-1.70	4.00-14.00	0.13-0.15	0.0-2.9	0.0-1.0	.28	.28	5	3	86
	10-60	10-18	1.50-1.70	4.00-14.00	0.13-0.15	0.0-2.9	0.0-0.1	.28	.32			
Lincoyer-----	0-9	12-18	1.30-1.50	4.00-14.00	0.16-0.18	0.0-2.9	0.5-1.0	.49	.49	5	4L	86
	9-60	12-18	1.30-1.50	4.00-14.00	0.15-0.18	0.0-2.9	0.5-1.0	.49	.49			
0374:												
Heist-----	0-4	8-18	1.40-1.60	14.00-42.00	0.13-0.15	0.0-2.9	0.6-1.0	.32	.37	5	3	86
	4-40	8-18	1.45-1.65	14.00-42.00	0.11-0.13	0.0-2.9	0.6-1.0	.24	.32			
	40-60	8-18	1.45-1.65	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.6	.24	.32			
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Zerk-----	0-2	12-17	1.35-1.55	14.00-42.00	0.08-0.11	0.0-2.9	0.5-1.0	.17	.32	2	4	86
	2-16	12-17	1.35-1.55	14.00-42.00	0.11-0.13	0.0-2.9	0.0-0.5	.17	.37			
	16-60	0-10	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.17			
0375:												
Toano-----	0-9	8-15	1.35-1.55	4.00-14.00	0.14-0.16	0.0-2.9	0.5-1.0	.64	.64	5	4L	86
	9-27	8-15	1.40-1.60	4.00-14.00	0.14-0.16	0.0-2.9	0.0-0.5	.55	.55			
	27-60	8-15	1.40-1.60	4.00-14.00	0.14-0.16	0.0-2.9	0.0-0.5	.55	.55			
Heist-----	0-4	8-18	1.40-1.60	14.00-42.00	0.13-0.15	0.0-2.9	0.6-1.0	.32	.37	5	3	86
	4-40	8-18	1.45-1.65	14.00-42.00	0.11-0.13	0.0-2.9	0.6-1.0	.24	.32			
	40-60	8-18	1.45-1.65	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.6	.24	.32			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
0380: Cobre-----	0-7	15-25	1.10-1.25	4.00-14.00	0.21-0.28	3.0-5.9	1.0-2.0	.43	.49	3	6	48
	7-15	15-25	1.15-1.30	4.00-14.00	0.19-0.28	3.0-5.9	0.5-1.0	.37	.43			
	15-34	8-18	1.15-1.30	4.00-14.00	0.17-0.25	0.0-2.9	0.0-0.5	.37	.43			
	34-38	---	---	0.01-0.42	---	---	---	---	---			
Tzar-----	0-3	18-25	1.15-1.25	4.00-14.00	0.07-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	3-12	18-25	1.20-1.30	4.00-14.00	0.05-0.11	0.0-2.9	0.0-1.0	.10	.43			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
Jackpot-----	0-4	5-10	0.80-1.00	1.40-4.00	0.25-0.50	0.0-2.9	2.0-3.0	.20	.24	2	3	86
	4-11	5-10	0.80-1.00	1.40-4.00	0.25-0.50	0.0-2.9	0.5-2.0	.20	.24			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
0381: Cobre-----	0-7	15-25	1.10-1.25	4.00-14.00	0.21-0.28	3.0-5.9	1.0-2.0	.43	.49	3	6	48
	7-15	15-25	1.15-1.30	4.00-14.00	0.19-0.28	3.0-5.9	0.5-1.0	.37	.43			
	15-34	8-18	1.15-1.30	4.00-14.00	0.17-0.25	0.0-2.9	0.0-0.5	.37	.43			
	34-38	---	---	0.01-0.42	---	---	---	---	---			
Hundraw-----	0-5	8-18	1.40-1.55	14.00-42.00	0.10-0.13	0.0-2.9	0.5-1.0	.15	.28	1	4	86
	5-10	8-18	1.40-1.55	4.00-14.00	0.12-0.17	0.0-2.9	0.0-0.5	.20	.32			
	10-14	---	---	0.01-0.42	---	---	---	---	---			
Jackpot-----	0-4	5-10	0.80-1.00	1.40-4.00	0.25-0.50	0.0-2.9	2.0-3.0	.20	.24	2	3	86
	4-11	5-10	0.80-1.00	1.40-4.00	0.25-0.50	0.0-2.9	0.5-2.0	.20	.24			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
0382: Cobre-----	0-7	15-25	1.10-1.25	4.00-14.00	0.21-0.28	3.0-5.9	1.0-2.0	.43	.49	3	6	48
	7-15	15-25	1.15-1.30	4.00-14.00	0.19-0.28	3.0-5.9	0.5-1.0	.37	.43			
	15-34	8-18	1.15-1.30	4.00-14.00	0.17-0.25	0.0-2.9	0.0-0.5	.37	.43			
	34-38	---	---	0.01-0.42	---	---	---	---	---			
Enko-----	0-2	10-18	1.35-1.45	14.00-42.00	0.11-0.15	0.0-2.9	1.0-2.0	.43	.49	5	3	86
	2-14	10-18	1.40-1.50	14.00-42.00	0.12-0.17	0.0-2.9	0.5-1.0	.43	.49			
	14-32	10-18	1.65-1.70	0.42-1.40	0.10-0.13	0.0-2.9	0.0-0.5	.37	.43			
	32-60	10-18	1.40-1.50	4.00-14.00	0.12-0.17	0.0-2.9	0.0-0.5	.43	.49			
0390: Hardol-----	0-13	18-27	1.10-1.30	4.00-14.00	0.07-0.13	0.0-2.9	2.0-3.0	.28	.64	5	6	48
	13-37	20-27	1.10-1.30	4.00-14.00	0.03-0.08	0.0-2.9	1.0-3.0	.10	.64			
	37-60	20-27	1.10-1.30	4.00-14.00	0.03-0.07	0.0-2.9	1.0-2.0	.10	.43			
Muiral-----	0-9	12-18	1.35-1.55	4.00-14.00	0.14-0.16	0.0-2.9	1.0-3.0	.28	.43	2	6	48
	9-33	12-18	1.40-1.60	4.00-14.00	0.08-0.12	0.0-2.9	0.5-1.0	.10	.49			
	33-37	---	---	0.00-0.01	---	---	---	---	---			
Rubble Land----	0-60	0-0	1.70-2.35	141.0-705.0	0.00-0.10	0.0-2.9	0.0-0.1	---	---	-	8	0
0392: Hardol-----	0-12	18-27	1.10-1.30	4.00-14.00	0.07-0.13	0.0-2.9	2.0-3.0	.28	.64	5	6	48
	12-33	20-27	1.10-1.30	4.00-14.00	0.03-0.08	0.0-2.9	1.0-3.0	.10	.64			
	33-60	20-27	1.10-1.30	4.00-14.00	0.03-0.07	0.0-2.9	1.0-2.0	.10	.43			
Muiral-----	0-9	12-18	1.35-1.55	4.00-14.00	0.14-0.16	0.0-2.9	1.0-3.0	.28	.43	2	6	48
	9-33	12-18	1.40-1.60	4.00-14.00	0.08-0.12	0.0-2.9	0.5-1.0	.10	.49			
	33-37	---	---	0.00-0.01	---	---	---	---	---			
Onkeyo-----	0-8	18-27	1.10-1.30	4.00-14.00	0.06-0.13	0.0-2.9	2.0-4.0	.10	.55	1	6	48
	8-17	25-35	1.20-1.40	1.40-4.00	0.04-0.10	0.0-2.9	0.5-1.0	.05	.43			
	17-21	---	---	0.00-0.01	---	---	---	---	---			
0400: Cleavage-----	0-7	15-25	1.15-1.35	4.00-14.00	0.12-0.14	0.0-2.9	1.0-3.0	.10	.32	1	7	38
	7-15	20-35	1.25-1.45	1.40-4.00	0.10-0.12	0.0-2.9	0.5-1.0	.10	.49			
	15-19	---	---	0.00-0.01	---	---	---	---	---			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Cleavage-----	0-7	15-25	1.15-1.35	4.00-14.00	0.12-0.14	0.0-2.9	1.0-3.0	.10	.32	1	7	38
	7-15	20-35	1.25-1.45	1.40-4.00	0.10-0.12	0.0-2.9	0.5-1.0	.10	.49			
	15-19	---	---	0.00-0.01	---	---	---	---	---			
Sumine-----	0-9	10-20	1.20-1.40	4.00-14.00	0.09-0.12	0.0-2.9	2.0-4.0	.17	.43	2	7	38
	9-23	25-35	1.40-1.60	4.00-14.00	0.08-0.12	0.0-2.9	0.5-2.0	.15	.55			
	23-27	---	---	0.00-0.01	---	---	---	---	---			
410: Jericho-----	0-4	15-20	1.40-1.60	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.17	.37	1	6	48
	4-14	10-18	1.50-1.70	14.00-42.00	0.06-0.08	0.0-2.9	0.5-1.0	.05	.24			
	14-28	---	---	0.00-0.01	---	---	---	---	---			
	28-60	2-4	1.55-1.75	141.0-705.0	0.02-0.03	0.0-2.9	0.0-0.5	.02	.15			
411: Jericho-----	0-4	15-20	1.40-1.60	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.17	.37	1	6	48
	4-14	10-18	1.50-1.70	14.00-42.00	0.06-0.08	0.0-2.9	0.5-1.0	.05	.24			
	14-28	---	---	0.00-0.01	---	---	---	---	---			
	28-60	2-4	1.55-1.75	141.0-705.0	0.02-0.03	0.0-2.9	0.0-0.5	.02	.15			
Armespan-----	0-7	10-18	1.40-1.55	14.00-42.00	0.05-0.08	0.0-2.9	0.8-2.0	.10	.32	3	5	56
	7-21	12-18	1.35-1.50	4.00-14.00	0.09-0.12	0.0-2.9	0.0-0.5	.24	.37			
	21-32	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.24			
	32-60	5-10	1.45-1.60	42.00-141.0	0.02-0.05	0.0-2.9	0.0-0.5	.05	.17			
0420: Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
0421: Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
Automal-----	0-8	15-25	1.30-1.50	4.00-14.00	0.14-0.18	0.0-2.9	1.0-2.0	.20	.55	5	5	56
	8-49	10-20	1.40-1.60	0.42-1.40	0.04-0.06	0.0-2.9	0.0-1.0	.02	.37			
	49-60	5-15	1.50-1.70	0.42-1.40	0.03-0.05	0.0-2.9	0.0-0.1	.02	.10			
0422: Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
Zimbob-----	0-2	10-18	1.15-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.32	1	6	48
	2-11	10-18	1.20-1.40	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.37			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
0424: Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Hundraw-----	0-5	8-18	1.40-1.55	14.00-42.00	0.10-0.13	0.0-2.9	0.5-1.0	.15	.28	1	4	86
	5-10	8-18	1.40-1.55	4.00-14.00	0.12-0.17	0.0-2.9	0.0-0.5	.20	.32			
	10-14	---	---	0.01-0.42	---	---	---	---	---			
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
0426: Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
Automal-----	0-8	15-25	1.30-1.50	4.00-14.00	0.14-0.18	0.0-2.9	1.0-2.0	.20	.55	5	5	56
	8-49	10-20	1.40-1.60	0.42-1.40	0.04-0.06	0.0-2.9	0.0-1.0	.02	.37			
	49-60	5-15	1.50-1.70	0.42-1.40	0.03-0.05	0.0-2.9	0.0-0.1	.02	.10			
Wintermute-----	0-3	8-18	1.35-1.55	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.8	.28	.55	3	5	56
	3-15	8-18	1.40-1.60	4.00-14.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.49			
	15-53	8-18	1.45-1.65	0.42-1.40	0.03-0.07	0.0-2.9	0.0-0.5	.05	.37			
	53-60	27-35	1.40-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.17	.55			
0429: Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
Automal-----	0-8	15-25	1.30-1.50	4.00-14.00	0.14-0.18	0.0-2.9	1.0-2.0	.20	.55	5	5	56
	8-49	10-20	1.40-1.60	0.42-1.40	0.04-0.06	0.0-2.9	0.0-1.0	.02	.37			
	49-60	5-15	1.50-1.70	0.42-1.40	0.03-0.05	0.0-2.9	0.0-0.1	.02	.10			
Palinor-----	0-3	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	3-14	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	14-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
0430: Graley-----	0-7	10-20	1.30-1.50	4.00-14.00	0.08-0.14	0.0-2.9	1.0-2.0	.17	.43	1	7	38
	7-19	35-45	1.25-1.40	0.42-1.40	0.07-0.10	3.0-5.9	0.5-1.0	.15	.49			
	19-23	---	---	0.00-0.01	---	---	---	---	---			
Ploche-----	0-2	8-12	1.40-1.60	14.00-42.00	0.06-0.08	0.0-2.9	1.0-3.0	.05	.28	1	5	56
	2-12	35-50	1.40-1.55	0.42-1.40	0.10-0.12	3.0-5.9	1.0-2.0	.15	.37			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
Cropper-----	0-7	16-20	1.25-1.45	4.00-14.00	0.09-0.11	0.0-2.9	1.0-4.0	.15	.55	1	7	38
	7-14	27-35	1.35-1.55	1.40-4.00	0.05-0.08	3.0-5.9	1.0-2.0	.05	.32			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
0431: Graley-----	0-7	10-20	1.30-1.50	4.00-14.00	0.11-0.15	0.0-2.9	1.0-2.0	.28	.49	1	6	48
	7-19	35-45	1.25-1.40	0.42-1.40	0.07-0.10	3.0-5.9	0.5-1.0	.15	.49			
	19-23	---	---	0.00-0.01	---	---	---	---	---			
Chen-----	0-3	20-27	1.10-1.25	4.00-14.00	0.08-0.12	0.0-2.9	2.0-3.0	.10	.32	1	7	38
	3-16	40-55	1.25-1.40	0.01-0.42	0.05-0.09	3.0-5.9	0.5-2.0	.10	.49			
	16-20	---	---	0.00-0.01	---	---	---	---	---			
McIvey-----	0-12	20-27	1.05-1.20	4.00-14.00	0.08-0.17	0.0-2.9	2.0-5.0	.17	.64	5	7	38
	12-18	30-40	1.25-1.45	1.40-4.00	0.12-0.17	3.0-5.9	1.0-2.0	.10	.43			
	18-60	40-50	1.25-1.40	0.01-0.42	0.07-0.10	3.0-5.9	0.5-1.0	.05	.37			
0440: Lemoine-----	0-9	8-15	1.35-1.55	14.00-42.00	0.07-0.09	0.0-2.9	0.5-1.0	.10	.32	1	5	56
	9-11	8-15	1.35-1.55	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.5	.10	.28			
	11-15	---	---	0.00-0.01	---	---	---	---	---			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Bijorja-----	0-4	8-18	1.40-1.60	14.00-42.00	0.07-0.09	0.0-2.9	0.5-1.0	.17	.32	3	4	86
	4-25	10-18	1.40-1.60	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.5	.10	.24			
	25-29	---	---	0.42-141.0	---	---	---	---	---			
Lomoina-----	0-9	8-15	1.35-1.55	14.00-42.00	0.07-0.09	0.0-2.9	0.5-1.0	.10	.32	1	5	56
	9-11	8-15	1.35-1.55	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.5	.10	.28			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
0460:												
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Automal-----	0-8	15-25	1.30-1.50	4.00-14.00	0.14-0.18	0.0-2.9	1.0-2.0	.20	.55	5	5	56
	8-49	10-20	1.40-1.60	0.42-1.40	0.04-0.06	0.0-2.9	0.0-1.0	.02	.37			
	49-60	5-15	1.50-1.70	0.42-1.40	0.03-0.05	0.0-2.9	0.0-0.1	.02	.10			
Hundraw-----	0-5	8-18	1.40-1.55	14.00-42.00	0.10-0.13	0.0-2.9	0.5-1.0	.15	.28	1	4	86
	5-10	8-18	1.40-1.55	4.00-14.00	0.12-0.17	0.0-2.9	0.0-0.5	.20	.32			
	10-14	---	---	0.01-0.42	---	---	---	---	---			
0470:												
Rozara-----	0-2	4-8	1.35-1.55	42.00-141.0	0.02-0.04	0.0-2.9	3.0-5.0	.05	.15	1	5	56
	2-11	14-18	1.40-1.60	14.00-42.00	0.06-0.11	0.0-2.9	2.0-3.0	.10	.37			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Cucamungo-----	0-3	10-18	1.30-1.50	14.00-42.00	0.05-0.07	0.0-2.9	2.0-4.0	.05	.32	2	5	56
	3-14	20-30	1.20-1.40	4.00-14.00	0.07-0.09	0.0-2.9	1.0-2.0	.05	.37			
	14-19	---	---	0.01-0.42	---	---	---	---	---			
Rock Outcrop----	---	---	---	---	---	---	---	---	---	-	---	---
0471:												
Cucamungo-----	0-3	10-18	1.30-1.50	14.00-42.00	0.05-0.07	0.0-2.9	2.0-4.0	.05	.32	2	5	56
	3-14	20-30	1.20-1.40	4.00-14.00	0.07-0.09	0.0-2.9	1.0-2.0	.05	.37			
	14-19	---	---	0.01-0.42	---	---	---	---	---			
Hendap-----	0-7	6-12	1.45-1.65	14.00-42.00	0.04-0.06	0.0-2.9	2.0-3.0	.05	.20	1	5	56
	7-13	6-12	1.50-1.70	14.00-42.00	0.04-0.06	0.0-2.9	1.0-2.0	.05	.15			
	13-17	---	---	0.00-0.01	---	---	---	---	---			
Rock Outcrop----	---	---	---	---	---	---	---	---	---	-	---	---
0480:												
Shabliss-----	0-2	10-18	1.40-1.55	14.00-42.00	0.09-0.12	0.0-2.9	1.0-2.0	.20	.43	2	4	86
	2-15	5-15	1.35-1.55	4.00-14.00	0.15-0.17	0.0-2.9	0.5-1.0	.55	.55			
	15-31	---	---	0.01-0.42	---	---	---	---	---			
	31-60	0-5	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
0485:												
Shabliss-----	0-2	10-18	1.40-1.55	14.00-42.00	0.09-0.12	0.0-2.9	1.0-2.0	.20	.43	2	4	86
	2-15	5-15	1.35-1.55	4.00-14.00	0.15-0.17	0.0-2.9	0.5-1.0	.55	.55			
	15-31	---	---	0.01-0.42	---	---	---	---	---			
	31-60	0-5	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
Parisa-----	0-5	8-18	1.50-1.65	4.00-14.00	0.10-0.15	0.0-2.9	1.0-2.0	.20	.37	2	5	56
	5-36	8-18	1.50-1.70	4.00-14.00	0.04-0.12	0.0-2.9	0.5-1.0	.10	.37			
	36-55	---	---	0.00-0.01	---	---	---	---	---			
	55-60	0-8	1.60-1.75	42.00-141.0	0.03-0.11	0.0-2.9	0.0-0.5	.02	.15			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Hunnton-----	0-8	10-25	1.20-1.25	4.00-14.00	0.14-0.18	0.0-2.9	1.0-2.0	.49	.55	2	5	56
	8-12	20-30	1.50-1.55	1.40-4.00	0.15-0.21	3.0-5.9	0.5-2.0	.49	.49			
	12-21	45-55	1.20-1.25	0.42-1.40	0.10-0.16	6.0-8.9	0.5-1.0	.28	.37			
	21-40	---	---	0.00-0.01	---	---	---	---	---			
0490: Wintermute-----	0-3	8-18	1.35-1.55	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.8	.28	.55	3	5	56
	3-15	8-18	1.40-1.60	4.00-14.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.49			
	15-53	8-18	1.45-1.65	0.42-1.40	0.03-0.07	0.0-2.9	0.0-0.5	.05	.37			
	53-60	27-35	1.40-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.17	.55			
Automal-----	0-8	15-25	1.30-1.50	4.00-14.00	0.14-0.18	0.0-2.9	1.0-2.0	.20	.55	5	5	56
	8-49	10-20	1.40-1.60	0.42-1.40	0.04-0.06	0.0-2.9	0.0-1.0	.02	.37			
	49-60	5-15	1.50-1.70	0.42-1.40	0.03-0.05	0.0-2.9	0.0-0.1	.02	.10			
0492: Wintermute-----	0-3	8-18	1.35-1.55	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.8	.28	.55	3	5	56
	3-15	8-18	1.40-1.60	4.00-14.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.49			
	15-53	8-18	1.45-1.65	0.42-1.40	0.03-0.07	0.0-2.9	0.0-0.5	.05	.37			
	53-60	27-35	1.40-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.17	.55			
Peeko-----	0-4	10-27	1.35-1.55	4.00-14.00	0.10-0.15	0.0-2.9	1.0-2.0	.24	.43	1	5	56
	4-10	18-27	1.40-1.60	4.00-14.00	0.12-0.15	3.0-5.9	0.5-1.0	.24	.43			
	10-30	---	---	0.00-0.01	---	---	---	---	---			
Hundraw-----	0-5	8-18	1.40-1.55	14.00-42.00	0.10-0.13	0.0-2.9	0.5-1.0	.15	.28	1	4	86
	5-10	8-18	1.40-1.55	4.00-14.00	0.12-0.17	0.0-2.9	0.0-0.5	.20	.32			
	10-14	---	---	0.01-0.42	---	---	---	---	---			
0494: Wintermute-----	0-3	8-18	1.35-1.55	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.8	.28	.55	3	5	56
	3-15	8-18	1.40-1.60	4.00-14.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.49			
	15-53	8-18	1.45-1.65	0.42-1.40	0.03-0.07	0.0-2.9	0.0-0.5	.05	.37			
	53-60	27-35	1.40-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.17	.55			
Pyrat-----	0-6	12-20	1.40-1.60	14.00-42.00	0.08-0.10	0.0-2.9	1.0-2.0	.15	.28	3	4	86
	6-14	10-18	1.45-1.65	14.00-42.00	0.05-0.08	0.0-2.9	0.5-1.0	.10	.37			
	14-21	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.15	.49			
	21-42	10-18	1.50-1.70	14.00-42.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.37			
	42-60	5-10	1.45-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Automal-----	0-8	10-20	1.35-1.55	4.00-14.00	0.08-0.10	0.0-2.9	1.0-2.0	.10	.32	5	4	86
	8-49	10-20	1.40-1.60	0.42-1.40	0.04-0.06	0.0-2.9	0.0-1.0	.02	.37			
	49-60	5-15	1.50-1.70	0.42-1.40	0.03-0.05	0.0-2.9	0.0-0.1	.02	.10			
0496: Sodhouse-----	0-8	10-18	1.40-1.55	4.00-14.00	0.14-0.16	0.0-2.9	0.0-0.5	.28	.49	1	6	48
	8-16	10-18	1.40-1.55	4.00-14.00	0.13-0.16	0.0-2.9	0.0-0.5	.28	.49			
	16-60	---	---	0.00-0.01	---	---	---	---	---			
Sodhouse-----	0-8	10-18	1.40-1.55	4.00-14.00	0.14-0.16	0.0-2.9	0.0-0.5	.28	.49	1	6	48
	8-16	10-18	1.40-1.55	4.00-14.00	0.13-0.16	0.0-2.9	0.0-0.5	.28	.49			
	16-60	---	---	0.00-0.01	---	---	---	---	---			
Linoyer-----	0-9	12-18	1.35-1.55	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.17	.32	5	4	86
	9-60	12-18	1.30-1.50	4.00-14.00	0.14-0.20	0.0-2.9	0.5-1.0	.49	.49			
0497: Sodhouse-----	0-8	10-18	1.40-1.55	4.00-14.00	0.14-0.16	0.0-2.9	0.0-0.5	.28	.49	1	6	48
	8-16	10-18	1.40-1.55	4.00-14.00	0.13-0.16	0.0-2.9	0.0-0.5	.28	.49			
	16-60	---	---	0.00-0.01	---	---	---	---	---			
Sodhouse-----	0-8	10-18	1.40-1.55	4.00-14.00	0.14-0.16	0.0-2.9	0.0-0.5	.28	.49	1	6	48
	8-16	10-18	1.40-1.55	4.00-14.00	0.13-0.16	0.0-2.9	0.0-0.5	.28	.49			
	16-60	---	---	0.00-0.01	---	---	---	---	---			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.10-0.15	0.0-2.9	1.0-2.0	.24	.43	1	5	56
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
0501: Pharo-----	0-13	15-20	1.40-1.60	4.00-14.00	0.11-0.14	0.0-2.9	2.0-4.0	.20	.32	2	5	56
	13-36	10-20	1.50-1.65	4.00-14.00	0.05-0.09	0.0-2.9	0.5-1.0	.10	.28			
	36-60	2-8	1.60-1.75	141.0-705.0	0.01-0.02	0.0-2.9	0.0-0.5	.02	.10			
Izar-----	0-3	18-25	1.15-1.25	4.00-14.00	0.07-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	3-12	18-25	1.20-1.30	4.00-14.00	0.05-0.11	0.0-2.9	0.0-1.0	.10	.43			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
0503: Automal-----	0-8	15-25	1.30-1.50	4.00-14.00	0.14-0.18	0.0-2.9	1.0-2.0	.20	.55	5	5	56
	8-49	10-20	1.40-1.60	0.42-1.40	0.04-0.06	0.0-2.9	0.0-1.0	.02	.37			
	49-60	5-15	1.50-1.70	0.42-1.40	0.03-0.05	0.0-2.9	0.0-0.1	.02	.10			
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Wintermute-----	0-3	8-18	1.35-1.55	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.8	.28	.55	3	5	56
	3-15	8-18	1.40-1.60	4.00-14.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.49			
	15-53	8-18	1.45-1.65	0.42-1.40	0.03-0.07	0.0-2.9	0.0-0.5	.05	.37			
	53-60	27-35	1.40-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.17	.55			
0504: Automal-----	0-8	15-25	1.30-1.50	4.00-14.00	0.14-0.18	0.0-2.9	1.0-2.0	.20	.55	5	5	56
	8-49	10-20	1.40-1.60	0.42-1.40	0.04-0.06	0.0-2.9	0.0-1.0	.02	.37			
	49-60	5-15	1.50-1.70	0.42-1.40	0.03-0.05	0.0-2.9	0.0-0.1	.02	.10			
Wintermute-----	0-3	8-18	1.35-1.55	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.8	.28	.55	3	5	56
	3-15	8-18	1.40-1.60	4.00-14.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.49			
	15-53	8-18	1.45-1.65	0.42-1.40	0.03-0.07	0.0-2.9	0.0-0.5	.05	.37			
	53-60	27-35	1.40-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.17	.55			
0510: Adobe-----	0-7	18-27	1.25-1.45	4.00-14.00	0.08-0.14	0.0-2.9	2.0-4.0	.15	.49	1	7	38
	7-11	18-27	1.35-1.55	4.00-14.00	0.08-0.14	0.0-2.9	0.5-3.0	.15	.37			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Hardzem-----	0-5	10-20	1.40-1.60	4.00-14.00	0.10-0.15	0.0-2.9	1.0-2.0	.20	.37	3	6	48
	5-28	20-30	1.40-1.60	0.42-1.40	0.05-0.11	0.0-2.9	1.0-2.0	.05	.43			
	28-55	---	---	0.01-0.42	---	---	---	---	---			
Haunchee-----	0-4	10-20	1.05-1.25	4.00-14.00	0.09-0.11	0.0-2.9	3.0-5.0	.15	.49	1	7	38
	4-11	10-20	1.05-1.25	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.15	.55			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
0511: Adobe-----	0-7	18-27	1.25-1.45	4.00-14.00	0.08-0.14	0.0-2.9	2.0-4.0	.15	.49	1	7	38
	7-11	18-27	1.35-1.55	4.00-14.00	0.08-0.14	0.0-2.9	0.5-3.0	.15	.37			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Wardbay-----	0-14	18-27	1.05-1.20	4.00-14.00	0.06-0.12	0.0-2.9	2.0-4.0	.10	.37	3	6	48
	14-55	18-27	1.10-1.30	4.00-14.00	0.03-0.08	0.0-2.9	1.0-2.0	.05	.55			
	55-59	---	---	0.00-0.01	---	---	---	---	---			
Hardol-----	0-13	18-27	1.10-1.30	4.00-14.00	0.07-0.13	0.0-2.9	2.0-3.0	.28	.64	5	6	48
	13-37	20-27	1.10-1.30	4.00-14.00	0.03-0.08	0.0-2.9	1.0-3.0	.10	.64			
	37-60	20-27	1.10-1.30	4.00-14.00	0.03-0.07	0.0-2.9	1.0-2.0	.10	.43			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
0512: Adobe-----	0-7	18-27	1.25-1.45	4.00-14.00	0.08-0.14	0.0-2.9	2.0-4.0	.15	.49	1	6	48
	7-11	18-27	1.35-1.55	4.00-14.00	0.08-0.14	0.0-2.9	0.5-3.0	.15	.37			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Cavehill-----	0-12	18-27	1.05-1.20	4.00-14.00	0.12-0.14	0.0-2.9	4.0-6.0	.15	.43	2	6	48
	12-30	18-27	1.10-1.30	4.00-14.00	0.08-0.11	0.0-2.9	1.0-2.0	.17	.43			
	30-34	---	---	0.00-0.01	---	---	---	---	---			
Wardbay-----	0-14	18-27	1.05-1.20	4.00-14.00	0.06-0.12	0.0-2.9	2.0-4.0	.10	.37	3	6	48
	14-55	18-27	1.10-1.30	4.00-14.00	0.03-0.08	0.0-2.9	1.0-2.0	.05	.55			
	55-59	---	---	0.00-0.01	---	---	---	---	---			
0520: Haunchee-----	0-4	10-20	1.05-1.25	4.00-14.00	0.09-0.11	0.0-2.9	3.0-5.0	.15	.49	1	6	48
	4-11	10-20	1.05-1.25	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.15	.55			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Muiral-----	0-9	12-18	1.25-1.45	4.00-14.00	0.12-0.15	0.0-2.9	1.0-3.0	.20	.37	2	6	48
	9-33	12-18	1.35-1.55	4.00-14.00	0.08-0.12	0.0-2.9	0.5-2.0	.10	.37			
	33-37	---	---	0.00-0.01	---	---	---	---	---			
Wardbay-----	0-14	18-27	1.05-1.20	4.00-14.00	0.06-0.12	0.0-2.9	2.0-4.0	.10	.37	3	6	48
	14-55	18-27	1.10-1.30	4.00-14.00	0.03-0.08	0.0-2.9	1.0-2.0	.05	.55			
	55-59	---	---	0.00-0.01	---	---	---	---	---			
0530: Wardbay-----	0-14	18-27	1.05-1.20	4.00-14.00	0.06-0.12	0.0-2.9	2.0-4.0	.10	.37	3	6	48
	14-55	18-27	1.10-1.30	4.00-14.00	0.03-0.08	0.0-2.9	1.0-2.0	.05	.55			
	55-59	---	---	0.00-0.01	---	---	---	---	---			
Adobe-----	0-7	18-27	1.25-1.45	4.00-14.00	0.08-0.14	0.0-2.9	2.0-4.0	.15	.49	1	6	48
	7-11	18-27	1.35-1.55	4.00-14.00	0.08-0.14	0.0-2.9	0.5-3.0	.15	.37			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Haunchee-----	0-4	10-20	1.05-1.25	4.00-14.00	0.09-0.11	0.0-2.9	3.0-5.0	.15	.49	1	6	48
	4-11	10-20	1.05-1.25	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.15	.55			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
0532: Onkeyo-----	0-8	18-27	1.10-1.30	4.00-14.00	0.06-0.13	0.0-2.9	2.0-4.0	.10	.55	1	6	48
	8-17	25-35	1.20-1.40	1.40-4.00	0.04-0.10	0.0-2.9	0.5-1.0	.05	.43			
	17-21	---	---	0.00-0.01	---	---	---	---	---			
Pookaloo-----	0-2	10-18	1.20-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.20	.43	1	6	48
	2-14	10-18	1.35-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.0-0.5	.20	.55			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
Tecomar-----	0-2	18-27	1.30-1.45	4.00-14.00	0.03-0.06	0.0-2.9	1.0-2.0	.17	.43	1	8	0
	2-14	20-27	1.30-1.45	4.00-14.00	0.04-0.09	0.0-2.9	0.0-0.8	.10	.64			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
0540: Kunzler-----	0-16	12-20	1.15-1.35	4.00-14.00	0.14-0.17	0.0-2.9	1.0-2.0	.37	.37	5	4L	86
	16-48	10-18	1.35-1.60	1.40-4.00	0.11-0.13	0.0-2.9	0.0-0.5	.24	.24			
	48-60	10-18	1.30-1.60	4.00-14.00	0.09-0.17	0.0-2.9	0.0-0.5	.43	.43			
Sycomat-----	0-5	5-15	1.45-1.65	4.00-14.00	0.09-0.11	0.0-2.9	0.0-0.5	.43	.49	4	3	86
	5-11	5-18	1.40-1.60	4.00-14.00	0.07-0.09	0.0-2.9	0.0-0.5	.28	.43			
	11-48	5-18	1.45-1.65	4.00-14.00	0.05-0.07	0.0-2.9	0.0-0.5	.24	.37			
	48-60	2-5	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.02	.20			
0541: Kunzler-----	0-16	12-20	1.15-1.35	4.00-14.00	0.14-0.17	0.0-2.9	1.0-2.0	.37	.37	5	4L	86
	16-48	10-18	1.35-1.60	1.40-4.00	0.11-0.13	0.0-2.9	0.0-0.5	.24	.24			
	48-60	10-18	1.30-1.60	4.00-14.00	0.09-0.17	0.0-2.9	0.0-0.5	.43	.43			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Sheffit-----	0-4	17-27	1.40-1.60	4.00-14.00	0.19-0.21	3.0-5.9	0.5-1.0	.55	.55	5	4L	86
	4-60	35-50	1.40-1.60	0.01-0.42	0.14-0.17	6.0-8.9	0.0-0.5	.28	.28			
0550: Urmafot-----	0-7	18-27	1.25-1.45	4.00-14.00	0.10-0.15	3.0-5.9	2.0-4.0	.20	.37	1	5	56
	7-16	18-27	1.35-1.55	4.00-14.00	0.10-0.15	3.0-5.9	1.0-2.0	.20	.37			
	16-29	---	---	0.00-0.01	---	---	---	---	---			
	29-60	5-15	1.50-1.70	14.00-42.00	0.03-0.06	0.0-2.9	0.0-0.8	.02	.17			
Bobs-----	0-8	10-20	1.15-1.35	4.00-14.00	0.15-0.17	0.0-2.9	1.0-3.0	.37	.43	1	5	56
	8-13	10-20	1.25-1.45	4.00-14.00	0.14-0.17	0.0-2.9	1.0-2.0	.37	.49			
	13-17	---	---	0.00-0.01	---	---	---	---	---			
Urmafot-----	0-5	18-27	1.25-1.45	4.00-14.00	0.10-0.15	3.0-5.9	2.0-4.0	.20	.37	1	5	56
	5-9	18-27	1.35-1.55	4.00-14.00	0.10-0.15	3.0-5.9	1.0-2.0	.20	.37			
	9-29	---	---	0.00-0.01	---	---	---	---	---			
	29-60	5-15	1.50-1.70	14.00-42.00	0.03-0.06	0.0-2.9	0.0-0.8	.02	.17			
0551: Urmafot-----	0-7	18-27	1.25-1.45	4.00-14.00	0.10-0.15	3.0-5.9	2.0-4.0	.20	.37	1	5	56
	7-16	18-27	1.35-1.55	4.00-14.00	0.10-0.15	3.0-5.9	1.0-2.0	.20	.37			
	16-29	---	---	0.00-0.01	---	---	---	---	---			
	29-60	5-15	1.50-1.70	14.00-42.00	0.03-0.06	0.0-2.9	0.0-0.8	.02	.17			
Bobs-----	0-8	10-20	1.15-1.35	4.00-14.00	0.15-0.17	0.0-2.9	1.0-3.0	.37	.43	1	5	56
	8-13	10-20	1.25-1.45	4.00-14.00	0.14-0.17	0.0-2.9	1.0-2.0	.37	.49			
	13-17	---	---	0.00-0.01	---	---	---	---	---			
552: Urmafot-----	0-7	18-27	1.25-1.45	4.00-14.00	0.06-0.12	0.0-2.9	2.0-4.0	.10	.32	1	6	48
	7-16	18-27	1.35-1.55	4.00-14.00	0.10-0.15	3.0-5.9	1.0-2.0	.20	.37			
	16-29	---	---	0.00-0.01	---	---	---	---	---			
	29-60	5-15	1.50-1.70	14.00-42.00	0.03-0.06	0.0-2.9	0.0-0.8	.02	.17			
Pharo-----	0-13	15-20	1.40-1.60	4.00-14.00	0.11-0.14	0.0-2.9	2.0-4.0	.20	.32	2	5	56
	13-36	10-20	1.50-1.65	4.00-14.00	0.05-0.09	0.0-2.9	0.5-1.0	.10	.28			
	36-60	2-8	1.60-1.75	141.0-705.0	0.01-0.02	0.0-2.9	0.0-0.5	.02	.10			
0554: Urmafot-----	0-7	18-27	1.25-1.45	4.00-14.00	0.06-0.12	0.0-2.9	2.0-4.0	.10	.32	1	6	48
	7-16	18-27	1.35-1.55	4.00-14.00	0.10-0.15	3.0-5.9	1.0-2.0	.20	.37			
	16-29	---	---	0.00-0.01	---	---	---	---	---			
	29-60	5-15	1.50-1.70	14.00-42.00	0.03-0.06	0.0-2.9	0.0-0.8	.02	.17			
Tecomar-----	0-2	18-27	1.30-1.45	4.00-14.00	0.03-0.06	0.0-2.9	1.0-2.0	.17	.43	1	8	0
	2-14	20-27	1.30-1.45	4.00-14.00	0.04-0.09	0.0-2.9	0.0-0.8	.10	.64			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
Urmafot-----	0-7	18-27	1.25-1.45	4.00-14.00	0.06-0.12	0.0-2.9	2.0-4.0	.10	.32	1	6	48
	7-9	18-27	1.35-1.55	4.00-14.00	0.10-0.15	3.0-5.9	1.0-2.0	.20	.37			
	9-29	---	---	0.00-0.01	---	---	---	---	---			
	29-60	5-15	1.50-1.70	14.00-42.00	0.03-0.06	0.0-2.9	0.0-0.8	.02	.17			
0561: Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
Urmafot-----	0-7	18-27	1.25-1.45	4.00-14.00	0.06-0.12	0.0-2.9	2.0-4.0	.10	.32	1	6	48
	7-16	18-27	1.35-1.55	4.00-14.00	0.10-0.15	3.0-5.9	1.0-2.0	.20	.37			
	16-29	---	---	0.00-0.01	---	---	---	---	---			
	29-60	5-15	1.50-1.70	14.00-42.00	0.03-0.06	0.0-2.9	0.0-0.8	.02	.17			
Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
0562: Bobs-----	0-8 8-13 13-17	10-20 10-20 ---	1.15-1.35 1.25-1.45 ---	4.00-14.00 4.00-14.00 0.00-0.01	0.08-0.11 0.14-0.17 ---	0.0-2.9 0.0-2.9 ---	1.0-3.0 1.0-2.0 ---	.15 .37 ---	.49 .49 ---	1	6	48
0563: Bobs-----	0-8 8-13 13-17	10-20 10-20 ---	1.15-1.35 1.25-1.45 ---	4.00-14.00 4.00-14.00 0.00-0.01	0.15-0.17 0.14-0.17 ---	0.0-2.9 0.0-2.9 ---	1.0-3.0 1.0-2.0 ---	.37 .37 ---	.43 .49 ---	1	5	56
Pyrat-----	0-6 6-14 14-21 21-42 42-60	10-18 10-18 10-18 10-18 5-10	1.40-1.60 1.45-1.65 1.45-1.65 1.50-1.70 1.50-1.70	14.00-42.00 14.00-42.00 4.00-14.00 14.00-42.00 42.00-141.0	0.06-0.09 0.05-0.08 0.05-0.08 0.05-0.08 0.03-0.05	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	1.0-2.0 0.5-1.0 0.5-1.0 0.0-0.5 0.0-0.5	.05 .10 .15 .10 .05	.37 .37 .43 .37 .20	3	6	48
0575: Pookaloo-----	0-2 2-14 14-18	10-18 10-18 ---	1.20-1.35 1.35-1.50 ---	4.00-14.00 4.00-14.00 0.00-0.01	0.06-0.09 0.11-0.13 ---	0.0-2.9 0.0-2.9 ---	1.0-2.0 0.0-0.5 ---	.20 .20 ---	.43 .55 ---	1	6	48
Cavehill-----	0-12 12-30 30-34	18-27 18-27 ---	1.05-1.20 1.10-1.30 ---	4.00-14.00 4.00-14.00 0.00-0.01	0.12-0.14 0.08-0.11 ---	0.0-2.9 0.0-2.9 ---	4.0-6.0 1.0-2.0 ---	.15 .17 ---	.43 .43 ---	2	6	48
Rock Outcrop----	---	---	---	---	---	---	---	---	---	-	---	---
0576: Pookaloo-----	0-2 2-14 14-18	10-18 10-18 ---	1.20-1.35 1.35-1.50 ---	4.00-14.00 4.00-14.00 0.00-0.01	0.06-0.09 0.11-0.13 ---	0.0-2.9 0.0-2.9 ---	1.0-2.0 0.0-0.5 ---	.20 .20 ---	.43 .55 ---	1	6	48
Tecomar-----	0-2 2-14 14-18	18-27 20-27 ---	1.30-1.45 1.30-1.45 ---	4.00-14.00 4.00-14.00 0.00-0.01	0.03-0.06 0.04-0.09 ---	0.0-2.9 0.0-2.9 ---	1.0-2.0 0.0-0.8 ---	.17 .10 ---	.43 .64 ---	1	8	0
Onkeyo-----	0-8 8-17 17-21	18-27 25-35 ---	1.10-1.30 1.20-1.40 ---	4.00-14.00 1.40-4.00 0.00-0.01	0.06-0.13 0.04-0.10 ---	0.0-2.9 0.0-2.9 ---	2.0-4.0 0.5-1.0 ---	.10 .05 ---	.55 .43 ---	1	6	48
0582: Sheffit-----	0-10 10-60	10-18 35-50	1.45-1.65 1.35-1.55	14.00-42.00 0.01-0.42	0.13-0.15 0.14-0.17	0.0-2.9 6.0-8.9	0.5-1.0 0.0-0.5	.43 .28	.43 .28	2	3	86
Sheffit-----	0-4 4-60	10-18 35-50	1.45-1.65 1.40-1.60	14.00-42.00 0.01-0.42	0.10-0.12 0.14-0.17	0.0-2.9 6.0-8.9	0.5-1.0 0.0-0.5	.24 .28	.24 .28	2	3	86
Katelana-----	0-5 5-28 28-32 32-62	14-24 18-25 18-25 27-40	1.30-1.45 1.40-1.55 1.40-1.55 1.40-1.55	4.00-14.00 4.00-14.00 4.00-14.00 1.40-4.00	0.19-0.21 0.19-0.21 0.19-0.21 0.19-0.21	3.0-5.9 3.0-5.9 3.0-5.9 6.0-8.9	1.0-2.0 0.0-0.5 0.0-0.5 0.0-0.5	.37 .49 .49 .32	.37 .49 .49 .32	5	4L	86
0590: Upatad-----	0-1 1-14 14-18	18-27 27-35 ---	1.15-1.35 1.25-1.45 ---	4.00-14.00 1.40-4.00 0.00-0.01	0.08-0.14 0.08-0.14 ---	0.0-2.9 0.0-2.9 ---	2.0-4.0 1.0-2.0 ---	.15 .10 ---	.49 .49 ---	1	7	38
Segura-----	0-2 2-11 11-15	15-20 20-35 ---	1.35-1.55 1.40-1.60 ---	4.00-14.00 4.00-14.00 0.00-0.01	0.08-0.12 0.14-0.16 ---	3.0-5.9 3.0-5.9 ---	1.0-3.0 1.0-2.0 ---	.10 .24 ---	.37 .43 ---	1	7	38
0600: Onkeyo-----	0-8 8-17 17-21	18-27 25-35 ---	1.10-1.30 1.20-1.40 ---	4.00-14.00 1.40-4.00 0.00-0.01	0.06-0.13 0.04-0.10 ---	0.0-2.9 0.0-2.9 ---	2.0-4.0 0.5-1.0 ---	.10 .05 ---	.55 .43 ---	1	6	48

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
Amene-----	0-12	20-27	1.05-1.25	4.00-14.00	0.10-0.15	0.0-2.9	2.0-4.0	.17	.49	1	6	48
	12-18	18-27	1.10-1.30	4.00-14.00	0.06-0.13	0.0-2.9	0.5-2.0	.15	.43			
	18-22	---	---	0.00-0.01	---	---	---	---	---			
Pookaloo-----	0-2	10-18	1.20-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.20	.43	1	6	48
	2-14	10-18	1.35-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.0-0.5	.20	.55			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
0610: Wintermute-----	0-3	8-18	1.35-1.55	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.8	.28	.55	3	5	56
	3-15	8-18	1.40-1.60	4.00-14.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.49			
	15-53	8-18	1.45-1.65	0.42-1.40	0.03-0.07	0.0-2.9	0.0-0.5	.05	.37			
	53-60	27-35	1.40-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.17	.55			
Eastwell-----	0-5	10-18	1.25-1.40	14.00-42.00	0.13-0.15	0.0-2.9	1.0-2.0	.24	.43	2	4	86
	5-18	10-27	1.30-1.50	4.00-14.00	0.08-0.11	0.0-2.9	0.5-2.0	.24	.32			
	18-27	---	---	0.42-1.40	---	---	---	---	---			
	27-60	10-20	1.35-1.55	14.00-42.00	0.08-0.11	0.0-2.9	0.0-0.5	.24	.43			
0614: Wintermute-----	0-3	12-18	1.40-1.60	4.00-14.00	0.10-0.15	0.0-2.9	0.0-0.6	.20	.43	3	4	86
	3-15	8-18	1.40-1.60	4.00-14.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.49			
	15-53	8-18	1.45-1.65	0.42-1.40	0.03-0.07	0.0-2.9	0.0-0.5	.05	.37			
	53-60	27-35	1.40-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.17	.55			
Eastwell-----	0-5	10-18	1.25-1.40	14.00-42.00	0.13-0.15	0.0-2.9	1.0-2.0	.24	.43	2	4	86
	5-18	10-27	1.30-1.50	4.00-14.00	0.08-0.11	0.0-2.9	0.5-2.0	.24	.32			
	18-27	---	---	0.42-1.40	---	---	---	---	---			
	27-60	10-20	1.35-1.55	14.00-42.00	0.08-0.11	0.0-2.9	0.0-0.5	.24	.43			
Zerk-----	0-2	12-17	1.30-1.50	14.00-42.00	0.13-0.15	0.0-2.9	0.5-1.0	.20	.32	2	5	56
	2-16	12-17	1.35-1.55	14.00-42.00	0.11-0.13	0.0-2.9	0.0-0.5	.17	.37			
	16-60	0-10	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.17			
0617: Wintermute-----	0-3	8-18	1.35-1.55	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.8	.28	.55	3	5	56
	3-15	8-18	1.40-1.60	4.00-14.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.49			
	15-53	8-18	1.45-1.65	0.42-1.40	0.03-0.07	0.0-2.9	0.0-0.5	.05	.37			
	53-60	27-35	1.40-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.17	.55			
Zerk-----	0-2	12-17	1.30-1.50	14.00-42.00	0.13-0.15	0.0-2.9	0.5-1.0	.20	.32	2	5	56
	2-16	12-17	1.35-1.55	14.00-42.00	0.11-0.13	0.0-2.9	0.0-0.5	.17	.37			
	16-60	0-10	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.17			
Loray-----	0-12	10-20	1.35-1.55	4.00-14.00	0.10-0.15	0.0-2.9	0.0-1.0	.10	.43	2	5	56
	12-60	0-8	1.50-1.65	141.0-705.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
0620: Atlow-----	0-5	15-25	1.15-1.35	4.00-14.00	0.06-0.08	0.0-2.9	1.0-2.0	.17	.55	1	7	38
	5-18	27-35	1.30-1.50	1.40-4.00	0.08-0.10	0.0-2.9	0.0-0.5	.17	.43			
	18-22	---	---	0.00-0.01	---	---	---	---	---			
Atlow-----	0-5	15-25	1.15-1.35	4.00-14.00	0.06-0.08	0.0-2.9	1.0-2.0	.17	.55	1	7	38
	5-18	27-35	1.30-1.50	1.40-4.00	0.08-0.10	0.0-2.9	0.0-0.5	.17	.43			
	18-22	---	---	0.00-0.01	---	---	---	---	---			
0631: Eastwell-----	0-5	10-18	1.25-1.40	14.00-42.00	0.13-0.15	0.0-2.9	1.0-2.0	.24	.43	2	4	86
	5-18	10-27	1.30-1.50	4.00-14.00	0.08-0.11	0.0-2.9	0.5-2.0	.24	.32			
	18-27	---	---	0.42-1.40	---	---	---	---	---			
	27-60	10-20	1.35-1.55	14.00-42.00	0.08-0.11	0.0-2.9	0.0-0.5	.24	.43			
Wintermute-----	0-3	8-18	1.35-1.55	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.8	.28	.55	3	5	56
	3-15	8-18	1.40-1.60	4.00-14.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.49			
	15-53	8-18	1.45-1.65	0.42-1.40	0.03-0.07	0.0-2.9	0.0-0.5	.05	.37			
	53-60	27-35	1.40-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.17	.55			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
0632: Eastwell-----	0-5	10-18	1.25-1.40	14.00-42.00	0.13-0.15	0.0-2.9	1.0-2.0	.24	.43	2	4	86
	5-18	10-27	1.30-1.50	4.00-14.00	0.08-0.11	0.0-2.9	0.5-2.0	.24	.32			
	18-27	---	---	0.42-1.40	---	---	---	---	---			
	27-60	10-20	1.35-1.55	14.00-42.00	0.08-0.11	0.0-2.9	0.0-0.5	.24	.43			
Zafod-----	0-7	5-15	1.45-1.65	14.00-42.00	0.07-0.09	0.0-2.9	1.0-2.0	.17	.20	3	4	86
	7-28	5-15	1.50-1.70	42.00-141.0	0.04-0.07	0.0-2.9	0.5-1.0	.10	.20			
	28-38	---	---	0.42-1.40	---	---	---	---	---			
	38-60	2-8	1.60-1.80	42.00-141.0	0.02-0.03	0.0-2.9	0.0-0.5	.02	.10			
0634: Eastwell-----	0-5	10-18	1.25-1.40	14.00-42.00	0.13-0.15	0.0-2.9	1.0-2.0	.24	.43	2	4	86
	5-18	10-27	1.30-1.50	4.00-14.00	0.08-0.11	0.0-2.9	0.5-2.0	.24	.32			
	18-27	---	---	0.42-1.40	---	---	---	---	---			
	27-60	10-20	1.35-1.55	14.00-42.00	0.08-0.11	0.0-2.9	0.0-0.5	.24	.43			
Shabliss-----	0-2	10-18	1.40-1.55	14.00-42.00	0.09-0.12	0.0-2.9	1.0-2.0	.20	.43	2	4	86
	2-15	5-15	1.35-1.55	4.00-14.00	0.15-0.17	0.0-2.9	0.5-1.0	.55	.55			
	15-31	---	---	0.01-0.42	---	---	---	---	---			
	31-60	0-5	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
Izar-----	0-3	18-25	1.15-1.25	4.00-14.00	0.07-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	3-12	18-25	1.20-1.30	4.00-14.00	0.05-0.11	0.0-2.9	0.0-1.0	.10	.43			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
0636: Eastwell-----	0-5	10-15	1.10-1.25	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.15	.49	2	7	38
	5-18	10-27	1.30-1.50	4.00-14.00	0.08-0.11	0.0-2.9	0.5-2.0	.24	.32			
	18-27	---	---	0.42-1.40	---	---	---	---	---			
	27-60	10-20	1.35-1.55	14.00-42.00	0.08-0.11	0.0-2.9	0.0-0.5	.24	.43			
Hundraw-----	0-5	8-18	1.40-1.55	14.00-42.00	0.10-0.13	0.0-2.9	0.5-1.0	.15	.28	1	4	86
	5-10	8-18	1.40-1.55	4.00-14.00	0.12-0.17	0.0-2.9	0.0-0.5	.20	.32			
	10-14	---	---	0.01-0.42	---	---	---	---	---			
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
0650: Mispah-----	0-9	15-20	1.50-1.70	14.00-42.00	0.11-0.13	0.0-2.9	0.5-1.0	.28	.28	3	3	86
	9-32	40-50	1.25-1.45	0.01-0.42	0.14-0.16	6.0-8.9	0.0-0.5	.37	.37			
	32-40	---	---	0.01-0.42	---	---	---	---	---			
Zerk-----	0-2	12-17	1.35-1.55	14.00-42.00	0.08-0.11	0.0-2.9	0.5-1.0	.17	.32	2	4	86
	2-16	12-17	1.35-1.55	14.00-42.00	0.11-0.13	0.0-2.9	0.0-0.5	.17	.37			
	16-60	0-10	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.17			
Wintermute-----	0-3	8-18	1.35-1.55	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.8	.28	.55	3	5	56
	3-15	8-18	1.40-1.60	4.00-14.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.49			
	15-53	8-18	1.45-1.65	0.42-1.40	0.03-0.07	0.0-2.9	0.0-0.5	.05	.37			
	53-60	27-35	1.40-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.17	.55			
0671: Idway-----	0-4	8-18	1.50-1.70	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.24	.32	5	3	86
	4-12	8-18	1.50-1.70	14.00-42.00	0.10-0.12	0.0-2.9	0.0-0.5	.24	.32			
	12-27	8-18	1.55-1.70	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.43	.43			
	27-60	2-8	1.60-1.75	42.00-141.0	0.04-0.05	0.0-2.9	0.0-0.5	.05	.15			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Mysol-----	0-5	20-27	1.40-1.60	1.40-4.00	0.19-0.21	3.0-5.9	0.5-1.0	.55	.64	4	4L	86
	5-17	20-35	1.40-1.60	0.42-1.40	0.19-0.21	3.0-5.9	0.0-0.5	.55	.55			
	17-31	20-35	1.40-1.60	0.42-1.40	0.19-0.21	3.0-5.9	0.0-0.5	.55	.55			
	31-60	2-8	1.55-1.75	14.00-42.00	0.05-0.09	0.0-2.9	0.0-0.5	.15	.24			
0672:												
Idway-----	0-4	8-18	1.50-1.70	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.24	.32	5	3	86
	4-12	8-18	1.50-1.70	14.00-42.00	0.10-0.12	0.0-2.9	0.0-0.5	.24	.32			
	12-27	8-18	1.55-1.70	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.43	.43			
	27-60	2-8	1.60-1.75	42.00-141.0	0.04-0.05	0.0-2.9	0.0-0.5	.05	.15			
James Canyon----	0-31	15-25	1.15-1.30	4.00-14.00	0.14-0.16	3.0-5.9	1.0-3.0	.32	.43	5	5	56
	31-60	20-27	1.30-1.45	4.00-14.00	0.14-0.16	3.0-5.9	0.5-1.0	.32	.55			
0680:												
Simon-----	0-10	10-20	1.20-1.40	4.00-14.00	0.17-0.19	0.0-2.9	2.0-4.0	.37	.43	4	5	56
	10-15	18-35	1.25-1.45	1.40-4.00	0.17-0.20	3.0-5.9	0.5-2.0	.37	.49			
	15-47	35-45	1.25-1.40	1.40-4.00	0.16-0.19	6.0-8.9	0.5-1.0	.20	.37			
	47-60	20-35	1.35-1.55	4.00-14.00	0.08-0.10	0.0-2.9	0.0-0.5	.05	.32			
Graley-----	0-7	10-20	1.30-1.50	4.00-14.00	0.11-0.15	0.0-2.9	1.0-2.0	.28	.49	1	6	48
	7-19	35-45	1.25-1.40	0.42-1.40	0.07-0.10	3.0-5.9	0.5-1.0	.15	.49			
	19-23	---	---	0.00-0.01	---	---	---	---	---			
Chen-----	0-3	20-27	1.10-1.25	4.00-14.00	0.08-0.12	0.0-2.9	2.0-3.0	.10	.32	1	7	38
	3-16	40-55	1.25-1.40	0.01-0.42	0.05-0.09	3.0-5.9	0.5-2.0	.10	.49			
	16-20	---	---	0.00-0.01	---	---	---	---	---			
0691:												
Tarnach-----	0-3	18-27	1.35-1.55	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.15	.43	1	6	48
	3-12	18-27	1.40-1.60	4.00-14.00	0.09-0.11	0.0-2.9	0.5-1.0	.15	.43			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
Tarnach-----	0-3	18-27	1.35-1.55	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.15	.43	1	6	48
	3-12	18-27	1.40-1.60	4.00-14.00	0.09-0.11	0.0-2.9	0.5-1.0	.15	.43			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
Wesfil-----	0-6	12-18	1.30-1.50	4.00-14.00	0.07-0.10	0.0-2.9	1.0-2.0	.10	.43	1	6	48
	6-10	---	---	0.00-0.01	---	---	---	---	---			
0692:												
Tarnach-----	0-3	18-27	1.35-1.55	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.15	.43	1	6	48
	3-12	18-27	1.40-1.60	4.00-14.00	0.09-0.11	0.0-2.9	0.5-1.0	.15	.43			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
Upatad-----	0-2	18-27	1.15-1.35	4.00-14.00	0.08-0.14	0.0-2.9	2.0-4.0	.15	.49	1	7	38
	2-14	27-35	1.25-1.45	1.40-4.00	0.08-0.14	0.0-2.9	1.0-2.0	.10	.49			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
Wesfil-----	0-6	12-18	1.30-1.50	4.00-14.00	0.07-0.10	0.0-2.9	1.0-2.0	.10	.43	1	7	38
	6-10	---	---	0.00-0.01	---	---	---	---	---			
0700:												
Shabliss-----	0-2	10-18	1.40-1.55	14.00-42.00	0.09-0.12	0.0-2.9	1.0-2.0	.20	.43	2	4	86
	2-15	5-15	1.35-1.55	4.00-14.00	0.15-0.17	0.0-2.9	0.5-1.0	.55	.55			
	15-31	---	---	0.01-0.42	---	---	---	---	---			
	31-60	0-5	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
Tulase-----	0-2	8-18	1.35-1.50	4.00-14.00	0.15-0.17	0.0-2.9	1.0-2.0	.43	.43	5	3	86
	2-60	8-18	1.30-1.50	4.00-14.00	0.15-0.21	0.0-2.9	0.5-2.0	.55	.55			
Linoyer-----	0-9	12-18	1.30-1.50	4.00-14.00	0.16-0.18	0.0-2.9	0.5-1.0	.49	.49	5	4L	86
	9-60	12-18	1.30-1.50	4.00-14.00	0.15-0.18	0.0-2.9	0.5-1.0	.49	.49			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
0720: Mysol-----	0-5	27-35	1.35-1.55	0.42-1.40	0.19-0.21	3.0-5.9	0.5-1.0	.55	.55	4	4L	86
	5-17	20-35	1.40-1.60	0.42-1.40	0.19-0.21	3.0-5.9	0.0-0.5	.55	.55			
	17-31	20-35	1.40-1.60	0.42-1.40	0.19-0.21	3.0-5.9	0.0-0.5	.55	.55			
	31-60	2-8	1.55-1.75	14.00-42.00	0.05-0.09	0.0-2.9	0.0-0.5	.15	.24			
Mysol-----	0-5	27-35	1.35-1.55	0.42-1.40	0.19-0.21	3.0-5.9	0.5-1.0	.55	.55	4	4L	86
	5-17	20-35	1.40-1.60	0.42-1.40	0.19-0.21	3.0-5.9	0.0-0.5	.55	.55			
	17-31	20-35	1.40-1.60	0.42-1.40	0.19-0.21	3.0-5.9	0.0-0.5	.55	.55			
	31-60	2-8	1.55-1.75	14.00-42.00	0.05-0.09	0.0-2.9	0.0-0.5	.15	.24			
0730: Idway-----	0-4	4-10	1.50-1.70	42.00-141.0	0.08-0.09	0.0-2.9	0.5-1.0	.15	.17	5	2	134
	4-12	8-18	1.50-1.70	14.00-42.00	0.10-0.12	0.0-2.9	0.0-0.5	.24	.32			
	12-27	8-18	1.55-1.70	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.43	.43			
	27-60	2-8	1.60-1.75	42.00-141.0	0.04-0.05	0.0-2.9	0.0-0.5	.05	.15			
Kawich-----	0-2	0-5	1.50-1.65	141.0-705.0	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15	5	1	250
	2-60	0-5	1.50-1.65	141.0-705.0	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
Mysol-----	0-5	20-27	1.40-1.60	1.40-4.00	0.19-0.21	3.0-5.9	0.5-1.0	.55	.64	4	4L	86
	5-17	20-35	1.40-1.60	0.42-1.40	0.19-0.21	3.0-5.9	0.0-0.5	.55	.55			
	17-31	20-35	1.40-1.60	0.42-1.40	0.19-0.21	3.0-5.9	0.0-0.5	.55	.55			
	31-60	2-8	1.55-1.75	14.00-42.00	0.05-0.09	0.0-2.9	0.0-0.5	.15	.24			
0733: Idway-----	0-4	4-10	1.50-1.70	42.00-141.0	0.08-0.09	0.0-2.9	0.5-1.0	.15	.17	5	2	134
	4-12	8-18	1.50-1.70	14.00-42.00	0.10-0.12	0.0-2.9	0.0-0.5	.24	.32			
	12-27	8-18	1.55-1.70	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.43	.43			
	27-60	2-8	1.60-1.75	42.00-141.0	0.04-0.05	0.0-2.9	0.0-0.5	.05	.15			
Idway-----	0-4	8-18	1.50-1.70	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.24	.32	5	3	86
	4-12	8-18	1.50-1.70	14.00-42.00	0.10-0.12	0.0-2.9	0.0-0.5	.24	.32			
	12-27	8-18	1.55-1.70	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.43	.43			
	27-60	2-8	1.60-1.75	42.00-141.0	0.04-0.05	0.0-2.9	0.0-0.5	.05	.15			
Mysol-----	0-5	27-35	1.35-1.55	0.42-1.40	0.19-0.21	3.0-5.9	0.5-1.0	.55	.55	4	4L	86
	5-17	20-35	1.40-1.60	0.42-1.40	0.19-0.21	3.0-5.9	0.0-0.5	.55	.55			
	17-31	20-35	1.40-1.60	0.42-1.40	0.19-0.21	3.0-5.9	0.0-0.5	.55	.55			
	31-60	2-8	1.55-1.75	14.00-42.00	0.05-0.09	0.0-2.9	0.0-0.5	.15	.24			
0740: Upatad-----	0-1	18-27	1.25-1.45	4.00-14.00	0.06-0.09	0.0-2.9	2.0-4.0	.05	.43	1	8	0
	1-14	27-35	1.35-1.55	1.40-4.00	0.08-0.14	0.0-2.9	1.0-2.0	.10	.49			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
Pioche-----	0-2	5-15	1.35-1.55	4.00-14.00	0.11-0.13	0.0-2.9	1.0-3.0	.15	.43	1	8	0
	2-12	35-50	1.40-1.55	0.42-1.40	0.10-0.12	3.0-5.9	1.0-2.0	.15	.37			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
Tarnach-----	0-3	18-27	1.35-1.55	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.15	.43	1	6	48
	3-12	18-27	1.40-1.60	4.00-14.00	0.09-0.11	0.0-2.9	0.5-1.0	.15	.43			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
0760: Playas-----	0-6	27-40	1.50-1.70	0.01-0.42	0.02-0.04	6.0-8.9	0.0-0.1	.37	.37	-	4L	86
	6-60	35-70	1.60-1.80	0.01-0.42	0.02-0.04	6.0-8.9	0.0-0.1	.37	.37			
0761: Umberland-----	0-5	40-50	1.20-1.35	0.01-0.42	0.15-0.19	6.0-8.9	0.5-1.0	.32	.32	5	4	86
	5-60	35-50	1.30-1.45	0.01-0.42	0.15-0.21	6.0-8.9	0.0-0.5	.32	.32			
Umberland-----	0-15	40-45	1.20-1.35	1.40-4.00	0.15-0.21	6.0-8.9	0.5-1.0	.37	.37	5	4	86
	15-60	35-50	1.30-1.45	0.01-0.42	0.15-0.21	6.0-8.9	0.5-1.0	.32	.32			
0762: Umberland-----	0-5	40-50	1.20-1.35	0.01-0.42	0.15-0.19	6.0-8.9	0.5-1.0	.32	.32	5	4	86
	5-60	35-50	1.30-1.45	0.01-0.42	0.15-0.21	6.0-8.9	0.0-0.5	.32	.32			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Playas-----	0-6	27-40	1.50-1.70	0.01-0.42	0.02-0.04	6.0-8.9	0.0-0.1	.37	.37	-	4L	86
	6-60	35-70	1.60-1.80	0.01-0.42	0.02-0.04	6.0-8.9	0.0-0.1	.37	.37			
0763:												
Equis-----	0-6	40-50	1.10-1.30	0.01-0.42	0.09-0.11	6.0-8.9	1.0-2.0	.28	.28	5	4	86
	6-24	40-50	1.05-1.25	0.01-0.42	0.14-0.17	6.0-8.9	0.5-1.0	.28	.28			
	24-41	30-45	1.25-1.45	0.01-0.42	0.14-0.17	6.0-8.9	0.0-0.5	.24	.24			
	41-60	20-45	1.30-1.50	0.42-1.40	0.15-0.21	6.0-8.9	0.0-0.5	.32	.32			
Umberland-----	0-15	40-45	1.20-1.35	1.40-4.00	0.15-0.21	6.0-8.9	0.5-1.0	.37	.37	5	4	86
	15-60	35-50	1.30-1.45	0.01-0.42	0.15-0.21	6.0-8.9	0.5-1.0	.32	.32			
Duffer-----	0-25	27-35	1.30-1.45	1.40-4.00	0.19-0.21	3.0-5.9	1.0-3.0	.43	.43	5	4L	86
	25-60	20-35	1.35-1.55	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
0764:												
Umberland-----	0-15	35-40	1.25-1.40	1.40-4.00	0.17-0.21	6.0-8.9	0.5-1.0	.43	.43	5	4L	86
	15-60	35-50	1.30-1.45	0.01-0.42	0.15-0.21	6.0-8.9	0.5-1.0	.32	.32			
Rubylake-----	0-7	27-35	1.35-1.55	1.40-4.00	0.18-0.20	3.0-5.9	1.0-2.0	.37	.37	5	4L	86
	7-23	18-27	1.40-1.60	1.40-4.00	0.20-0.23	3.0-5.9	0.5-1.0	.55	.55			
	23-55	18-27	1.35-1.55	1.40-4.00	0.19-0.21	3.0-5.9	1.0-2.0	.55	.55			
	55-60	25-35	1.35-1.55	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
Orupa-----	0-6	35-40	1.30-1.45	4.00-14.00	0.19-0.21	6.0-8.9	2.0-3.0	.43	.43	5	4L	86
	6-60	35-45	1.25-1.45	4.00-14.00	0.14-0.16	6.0-8.9	0.0-0.5	.43	.43			
0765:												
Umberland-----	0-5	40-50	1.20-1.35	0.01-0.42	0.15-0.19	6.0-8.9	0.5-1.0	.32	.32	5	4	86
	5-60	35-50	1.30-1.45	0.01-0.42	0.15-0.21	6.0-8.9	0.0-0.5	.32	.32			
Umberland-----	0-15	40-45	1.20-1.35	1.40-4.00	0.15-0.21	6.0-8.9	0.5-1.0	.37	.37	5	4	86
	15-60	35-50	1.30-1.45	0.01-0.42	0.15-0.21	6.0-8.9	0.5-1.0	.32	.32			
Wendane-----	0-8	15-25	1.35-1.50	4.00-14.00	0.15-0.21	0.0-2.9	1.0-2.0	.55	.55	5	4L	86
	8-42	15-25	1.30-1.50	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43			
	42-60	27-35	1.30-1.50	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
0767:												
Umberland-----	0-15	40-45	1.20-1.35	1.40-4.00	0.15-0.21	6.0-8.9	0.5-1.0	.37	.37	5	4	86
	15-60	35-50	1.30-1.45	0.01-0.42	0.15-0.21	6.0-8.9	0.5-1.0	.32	.32			
Umberland-----	0-5	40-50	1.20-1.35	0.01-0.42	0.15-0.19	6.0-8.9	0.5-1.0	.32	.32	5	4	86
	5-60	35-50	1.30-1.45	0.01-0.42	0.15-0.21	6.0-8.9	0.0-0.5	.32	.32			
Orupa-----	0-6	40-55	1.20-1.35	4.00-14.00	0.13-0.15	6.0-8.9	2.0-3.0	.49	.49	5	4L	86
	6-60	35-45	1.25-1.45	4.00-14.00	0.14-0.16	6.0-8.9	0.0-0.5	.43	.43			
0781:												
Mysol-----	0-5	27-35	1.35-1.55	0.42-1.40	0.19-0.21	3.0-5.9	0.5-1.0	.55	.55	4	4L	86
	5-17	20-35	1.40-1.60	0.42-1.40	0.19-0.21	3.0-5.9	0.0-0.5	.55	.55			
	17-31	20-35	1.40-1.60	0.42-1.40	0.19-0.21	3.0-5.9	0.0-0.5	.55	.55			
	31-60	2-8	1.55-1.75	14.00-42.00	0.05-0.09	0.0-2.9	0.0-0.5	.15	.24			
Benin-----	0-7	15-25	1.30-1.50	4.00-14.00	0.17-0.19	0.0-2.9	0.0-0.5	.49	.49	3	4L	86
	7-60	40-50	1.50-1.70	0.01-0.42	0.14-0.16	6.0-8.9	0.0-0.5	.37	.37			
Wendane-----	0-8	27-35	1.30-1.45	1.40-4.00	0.19-0.21	3.0-5.9	1.0-2.0	.49	.49	5	4L	86
	8-42	15-25	1.30-1.50	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43			
	42-60	27-35	1.30-1.50	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
0800:												
Mazuma-----	0-15	10-14	1.40-1.55	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43	5	4L	86
	15-60	5-15	1.45-1.65	14.00-42.00	0.10-0.14	0.0-2.9	0.0-0.5	.24	.28			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Toano-----	0-9	8-15	1.35-1.55	4.00-14.00	0.14-0.16	0.0-2.9	0.5-1.0	.64	.64	5	4L	86
	9-27	8-15	1.40-1.60	4.00-14.00	0.14-0.16	0.0-2.9	0.0-0.5	.55	.55			
	27-60	8-15	1.40-1.60	4.00-14.00	0.14-0.16	0.0-2.9	0.0-0.5	.55	.55			
0801:												
Mazuma-----	0-15	10-14	1.40-1.55	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43	5	4L	86
	15-60	5-15	1.45-1.65	14.00-42.00	0.10-0.14	0.0-2.9	0.0-0.5	.24	.28			
Zerk-----	0-2	12-17	1.30-1.50	14.00-42.00	0.13-0.15	0.0-2.9	0.5-1.0	.20	.32	2	5	56
	2-16	12-17	1.35-1.55	14.00-42.00	0.11-0.13	0.0-2.9	0.0-0.5	.17	.37			
	16-60	0-10	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.17			
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
0804:												
Mazuma-----	0-15	10-14	1.40-1.55	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43	5	4L	86
	15-60	5-15	1.45-1.65	14.00-42.00	0.10-0.14	0.0-2.9	0.0-0.5	.24	.28			
Kawich-----	0-2	0-5	1.50-1.65	141.0-705.0	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15	5	1	250
	2-60	0-5	1.50-1.65	141.0-705.0	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
Playas-----	0-6	27-40	1.50-1.70	0.01-0.42	0.02-0.04	6.0-8.9	0.0-0.1	.37	.37	-	4L	86
	6-60	35-70	1.60-1.80	0.01-0.42	0.02-0.04	6.0-8.9	0.0-0.1	.37	.37			
0807:												
Mazuma-----	0-15	10-14	1.40-1.55	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43	5	4L	86
	15-60	5-15	1.45-1.65	14.00-42.00	0.10-0.14	0.0-2.9	0.0-0.5	.24	.28			
Kunzler-----	0-5	12-20	1.15-1.35	4.00-14.00	0.14-0.17	0.0-2.9	1.0-2.0	.37	.37	5	4L	86
	5-48	10-18	1.35-1.60	1.40-4.00	0.11-0.13	0.0-2.9	0.0-0.5	.24	.24			
	48-60	10-18	1.30-1.60	4.00-14.00	0.09-0.17	0.0-2.9	0.0-0.5	.43	.43			
Zerk-----	0-2	12-17	1.35-1.55	14.00-42.00	0.08-0.11	0.0-2.9	0.5-1.0	.17	.32	2	4	86
	2-16	12-17	1.35-1.55	14.00-42.00	0.11-0.13	0.0-2.9	0.0-0.5	.17	.37			
	16-60	0-10	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.17			
0823:												
Kunzler-----	0-16	12-20	1.15-1.35	4.00-14.00	0.14-0.17	0.0-2.9	1.0-2.0	.37	.37	5	4L	86
	16-48	10-18	1.35-1.60	1.40-4.00	0.11-0.13	0.0-2.9	0.0-0.5	.24	.24			
	48-60	10-18	1.30-1.60	4.00-14.00	0.09-0.17	0.0-2.9	0.0-0.5	.43	.43			
Pyrat-----	0-6	12-20	1.40-1.60	14.00-42.00	0.08-0.10	0.0-2.9	1.0-2.0	.15	.28	3	4	86
	6-14	10-18	1.45-1.65	14.00-42.00	0.05-0.08	0.0-2.9	0.5-1.0	.10	.37			
	14-21	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.15	.49			
	21-42	10-18	1.50-1.70	14.00-42.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.37			
	42-60	5-10	1.45-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Blimo-----	0-8	12-18	1.35-1.55	4.00-14.00	0.12-0.16	0.0-2.9	1.0-2.0	.20	.37	5	5	56
	8-21	12-18	1.40-1.60	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.5	.10	.32			
	21-36	12-18	1.40-1.60	0.42-1.40	0.07-0.09	0.0-2.9	0.0-0.5	.24	.32			
	36-60	12-18	1.40-1.60	0.42-1.40	0.10-0.14	0.0-2.9	0.0-0.5	.28	.32			
0824:												
Kunzler-----	0-16	12-20	1.15-1.35	4.00-14.00	0.14-0.17	0.0-2.9	1.0-2.0	.37	.37	5	4L	86
	16-48	10-18	1.35-1.60	1.40-4.00	0.11-0.13	0.0-2.9	0.0-0.5	.24	.24			
	48-60	10-18	1.30-1.60	4.00-14.00	0.09-0.17	0.0-2.9	0.0-0.5	.43	.43			
Katelana-----	0-5	14-24	1.30-1.45	4.00-14.00	0.19-0.21	3.0-5.9	1.0-2.0	.37	.37	5	4L	86
	5-28	18-25	1.40-1.55	4.00-14.00	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	28-32	18-25	1.40-1.55	4.00-14.00	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	32-60	27-40	1.40-1.55	1.40-4.00	0.19-0.21	6.0-8.9	0.0-0.5	.32	.32			
0827:												
Kunzler-----	0-16	12-20	1.15-1.35	4.00-14.00	0.14-0.17	0.0-2.9	1.0-2.0	.37	.37	5	4L	86
	16-48	10-18	1.35-1.60	1.40-4.00	0.11-0.13	0.0-2.9	0.0-0.5	.24	.24			
	48-60	10-18	1.30-1.60	4.00-14.00	0.09-0.17	0.0-2.9	0.0-0.5	.43	.43			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
James Canyon----	0-8	10-15	1.25-1.45	14.00-42.00	0.13-0.15	0.0-2.9	2.0-4.0	.37	.37	5	3	86
	8-33	18-27	1.30-1.50	4.00-14.00	0.12-0.15	3.0-5.9	2.0-4.0	.24	.43		3	86
	33-60	10-15	1.50-1.65	14.00-42.00	0.13-0.15	0.0-2.9	1.0-2.0	.37	.37		3	86
James Canyon----	0-31	15-25	1.15-1.30	4.00-14.00	0.14-0.16	3.0-5.9	1.0-3.0	.32	.43		5	56
	31-60	20-27	1.30-1.45	4.00-14.00	0.14-0.16	3.0-5.9	0.5-1.0	.32	.55		5	56
0828:												
Kunzler-----	0-16	12-20	1.15-1.35	4.00-14.00	0.14-0.17	0.0-2.9	1.0-2.0	.37	.37	5	4L	86
	16-48	10-18	1.35-1.60	1.40-4.00	0.11-0.13	0.0-2.9	0.0-0.5	.24	.24			
	48-60	10-18	1.30-1.60	4.00-14.00	0.09-0.17	0.0-2.9	0.0-0.5	.43	.43			
Pyrat-----	0-6	12-20	1.40-1.60	14.00-42.00	0.08-0.10	0.0-2.9	1.0-2.0	.15	.28	3	4	86
	6-14	10-18	1.45-1.65	14.00-42.00	0.05-0.08	0.0-2.9	0.5-1.0	.10	.37			
	14-21	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.15	.49			
	21-42	10-18	1.50-1.70	14.00-42.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.37			
	42-60	5-10	1.45-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Wendane-----	0-8	15-25	1.35-1.50	4.00-14.00	0.15-0.21	0.0-2.9	1.0-2.0	.55	.55	5	4L	86
	8-42	15-25	1.30-1.50	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43			
	42-60	27-35	1.30-1.50	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
0830:												
Pharo-----	0-13	15-20	1.40-1.60	4.00-14.00	0.11-0.14	0.0-2.9	2.0-4.0	.20	.32	2	5	56
	13-36	10-20	1.50-1.65	4.00-14.00	0.05-0.09	0.0-2.9	0.5-1.0	.10	.28			
	36-60	2-8	1.60-1.75	141.0-705.0	0.01-0.02	0.0-2.9	0.0-0.5	.02	.10			
Kzin-----	0-3	15-25	1.25-1.45	4.00-14.00	0.09-0.11	0.0-2.9	2.0-3.0	.15	.49	1	6	48
	3-9	15-25	1.30-1.50	4.00-14.00	0.06-0.09	0.0-2.9	0.5-2.0	.15	.49			
	9-13	---	---	0.01-0.42	---	---	---	---	---			
Pharo-----	0-13	15-20	1.40-1.60	4.00-14.00	0.11-0.14	0.0-2.9	2.0-4.0	.20	.32	2	5	56
	13-36	10-20	1.50-1.65	4.00-14.00	0.05-0.09	0.0-2.9	0.5-1.0	.10	.28			
	36-60	2-8	1.60-1.75	141.0-705.0	0.01-0.02	0.0-2.9	0.0-0.5	.02	.10			
0842:												
Katelana-----	0-5	14-24	1.30-1.45	4.00-14.00	0.19-0.21	3.0-5.9	1.0-2.0	.37	.37	5	4L	86
	5-28	18-25	1.40-1.55	4.00-14.00	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	28-32	18-25	1.40-1.55	4.00-14.00	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	32-60	27-40	1.40-1.55	1.40-4.00	0.19-0.21	6.0-8.9	0.0-0.5	.32	.32			
Timpie-----	0-8	18-27	1.15-1.30	1.40-4.00	0.16-0.18	0.0-2.9	0.5-1.0	.43	.43	5	4L	86
	8-19	18-27	1.15-1.30	1.40-4.00	0.15-0.17	0.0-2.9	0.0-0.5	.49	.55			
	19-60	18-27	1.15-1.30	1.40-4.00	0.04-0.10	0.0-2.9	0.0-0.5	.55	.55			
0843:												
Katelana-----	0-5	14-24	1.30-1.45	4.00-14.00	0.19-0.21	3.0-5.9	1.0-2.0	.37	.37	5	4L	86
	5-28	18-25	1.40-1.55	4.00-14.00	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	28-32	18-25	1.40-1.55	4.00-14.00	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	32-60	27-40	1.40-1.55	1.40-4.00	0.19-0.21	6.0-8.9	0.0-0.5	.32	.32			
Kawich-----	0-2	0-5	1.50-1.65	141.0-705.0	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15	5	1	250
	2-60	0-5	1.50-1.65	141.0-705.0	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
0845:												
Katelana-----	0-5	14-24	1.30-1.45	4.00-14.00	0.19-0.21	3.0-5.9	1.0-2.0	.37	.37	5	4L	86
	5-28	18-25	1.40-1.55	4.00-14.00	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	28-32	18-25	1.40-1.55	4.00-14.00	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	32-60	27-40	1.40-1.55	1.40-4.00	0.19-0.21	6.0-8.9	0.0-0.5	.32	.32			
Ragtown-----	0-5	20-27	1.30-1.50	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43	5	4L	86
	5-26	25-35	1.40-1.55	1.40-4.00	0.17-0.19	3.0-5.9	0.0-0.5	.32	.32			
	26-60	35-45	1.40-1.60	0.42-1.40	0.16-0.19	6.0-8.9	0.0-0.5	.32	.32			
Timpie-----	0-8	18-27	1.15-1.30	1.40-4.00	0.16-0.18	0.0-2.9	0.5-1.0	.43	.43	5	4L	86
	8-19	18-27	1.15-1.30	1.40-4.00	0.15-0.17	0.0-2.9	0.0-0.5	.49	.55			
	19-60	18-27	1.15-1.30	1.40-4.00	0.04-0.10	0.0-2.9	0.0-0.5	.55	.55			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
0847:												
Mazuma-----	0-15	10-14	1.40-1.55	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43	5	4L	86
	15-60	5-15	1.45-1.65	14.00-42.00	0.10-0.14	0.0-2.9	0.0-0.5	.24	.28			
Blimo-----	0-7	12-18	1.25-1.45	1.40-4.00	0.19-0.21	0.0-2.9	1.0-2.0	.43	.43	4	4L	86
	7-25	12-18	1.45-1.65	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.5	.10	.37			
	25-40	12-18	1.45-1.65	0.42-1.40	0.07-0.09	0.0-2.9	0.0-0.5	.24	.37			
	40-60	4-12	1.50-1.70	14.00-42.00	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
Wintermute-----	0-3	8-18	1.35-1.55	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.8	.28	.55	3	5	56
	3-15	8-18	1.40-1.60	4.00-14.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.49			
	15-53	8-18	1.45-1.65	0.42-1.40	0.03-0.07	0.0-2.9	0.0-0.5	.05	.37			
	53-60	27-35	1.40-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.17	.55			
0850:												
Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
Wintermute-----	0-3	8-18	1.35-1.55	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.8	.28	.55	3	5	56
	3-15	8-18	1.40-1.60	4.00-14.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.49			
	15-53	8-18	1.45-1.65	0.42-1.40	0.03-0.07	0.0-2.9	0.0-0.5	.05	.37			
	53-60	27-35	1.40-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.17	.55			
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
0851:												
Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
Zimbob-----	0-1	10-18	1.15-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.32	1	6	48
	1-6	10-18	1.20-1.40	4.00-14.00	0.06-0.09	0.0-2.9	0.5-1.0	.10	.32			
	6-10	---	---	0.00-0.01	---	---	---	---	---			
Tecomar-----	0-2	18-27	1.30-1.45	4.00-14.00	0.03-0.06	0.0-2.9	1.0-2.0	.17	.43	1	8	0
	2-14	20-27	1.30-1.45	4.00-14.00	0.04-0.09	0.0-2.9	0.0-0.8	.10	.64			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
0852:												
Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
Pyrat-----	0-6	12-20	1.40-1.60	14.00-42.00	0.08-0.10	0.0-2.9	1.0-2.0	.15	.28	3	4	86
	6-14	10-18	1.45-1.65	14.00-42.00	0.05-0.08	0.0-2.9	0.5-1.0	.10	.37			
	14-21	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.15	.49			
	21-42	10-18	1.50-1.70	14.00-42.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.37			
	42-60	5-10	1.45-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Shabliss-----	0-2	10-18	1.40-1.55	14.00-42.00	0.09-0.12	0.0-2.9	1.0-2.0	.20	.43	2	4	86
	2-15	5-15	1.35-1.55	4.00-14.00	0.15-0.17	0.0-2.9	0.5-1.0	.55	.55			
	15-31	---	---	0.01-0.42	---	---	---	---	---			
	31-60	0-5	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
0854:												
Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
Automal-----	0-8	15-25	1.30-1.50	4.00-14.00	0.14-0.18	0.0-2.9	1.0-2.0	.20	.55	5	5	56
	8-49	10-20	1.40-1.60	0.42-1.40	0.04-0.06	0.0-2.9	0.0-1.0	.02	.37			
	49-60	5-15	1.50-1.70	0.42-1.40	0.03-0.05	0.0-2.9	0.0-0.1	.02	.10			
Shabliss-----	0-2	10-18	1.40-1.55	14.00-42.00	0.09-0.12	0.0-2.9	1.0-2.0	.20	.43	2	4	86
	2-15	5-15	1.35-1.55	4.00-14.00	0.15-0.17	0.0-2.9	0.5-1.0	.55	.55			
	15-31	---	---	0.01-0.42	---	---	---	---	---			
	31-60	0-5	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
0856: Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.10-0.15	0.0-2.9	1.0-2.0	.24	.43	1	5	56
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
Parisa-----	0-5	8-18	1.50-1.65	4.00-14.00	0.10-0.15	0.0-2.9	1.0-2.0	.20	.37	2	5	56
	5-36	8-18	1.50-1.70	4.00-14.00	0.04-0.12	0.0-2.9	0.5-1.0	.10	.37			
	36-60	---	---	0.00-0.01	---	---	---	---	---			
0857: Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
Shabliss-----	0-2	10-18	1.40-1.55	14.00-42.00	0.09-0.12	0.0-2.9	1.0-2.0	.20	.43	2	4	86
	2-15	5-15	1.35-1.55	4.00-14.00	0.15-0.17	0.0-2.9	0.5-1.0	.55	.55			
	15-31	---	---	0.01-0.42	---	---	---	---	---			
	31-60	0-5	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
Linoyer-----	0-9	12-18	1.30-1.50	4.00-14.00	0.16-0.18	0.0-2.9	0.5-1.0	.49	.49	5	4L	86
	9-60	12-18	1.30-1.50	4.00-14.00	0.15-0.18	0.0-2.9	0.5-1.0	.49	.49			
0858: Palinor-----	0-8	10-18	1.30-1.50	4.00-14.00	0.05-0.11	0.0-2.9	1.0-2.0	.15	.55	1	6	48
	8-16	10-18	1.40-1.60	4.00-14.00	0.04-0.09	0.0-2.9	0.5-1.0	.10	.49			
	16-34	---	---	0.00-0.01	---	---	---	---	---			
	34-60	2-8	1.50-1.70	42.00-141.0	0.03-0.08	0.0-2.9	0.0-0.5	.05	.24			
Automal-----	0-8	15-25	1.30-1.50	4.00-14.00	0.14-0.18	0.0-2.9	1.0-2.0	.20	.55	5	5	56
	8-49	10-20	1.40-1.60	0.42-1.40	0.04-0.06	0.0-2.9	0.0-1.0	.02	.37			
	49-60	5-15	1.50-1.70	0.42-1.40	0.03-0.05	0.0-2.9	0.0-0.1	.02	.10			
Linoyer-----	0-9	12-18	1.30-1.50	4.00-14.00	0.16-0.18	0.0-2.9	0.5-1.0	.49	.49	5	4L	86
	9-60	12-18	1.30-1.50	4.00-14.00	0.15-0.18	0.0-2.9	0.5-1.0	.49	.49			
0870: Theriot-----	0-7	8-15	1.40-1.60	4.00-14.00	0.10-0.13	0.0-2.9	0.5-1.0	.20	.43	1	5	56
	7-18	5-14	1.45-1.60	4.00-14.00	0.04-0.16	0.0-2.9	0.5-1.0	.17	.37			
	18-22	---	---	0.00-0.01	---	---	---	---	---			
Zimbo-----	0-2	10-18	1.15-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.32	1	6	48
	2-11	10-18	1.20-1.40	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.37			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
0880: Duffer-----	0-4	20-27	1.35-1.50	4.00-14.00	0.19-0.21	3.0-5.9	0.5-1.0	.49	.49	5	4L	86
	4-60	20-35	1.35-1.55	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
Duffer-----	0-25	27-35	1.30-1.45	1.40-4.00	0.19-0.21	3.0-5.9	1.0-3.0	.43	.43	5	4L	86
	25-60	20-35	1.35-1.55	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
Kolde-----	0-4	18-25	1.20-1.40	4.00-14.00	0.19-0.21	3.0-5.9	3.0-4.0	.55	.55	5	4L	86
	4-11	22-27	1.30-1.50	4.00-14.00	0.19-0.21	3.0-5.9	1.0-3.0	.55	.55			
	11-60	40-50	1.40-1.60	0.42-1.40	0.14-0.17	6.0-8.9	0.0-1.0	.24	.24			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
0881: Duffer-----	0-4 4-60	20-27 20-35	1.35-1.50 1.35-1.55	4.00-14.00 1.40-4.00	0.19-0.21 0.19-0.21	3.0-5.9 3.0-5.9	0.5-1.0 0.0-0.5	.49 .49	.49 .49	5	4L	86
Kunzler-----	0-16 16-48 48-60	12-20 10-18 10-18	1.15-1.35 1.35-1.60 1.30-1.60	4.00-14.00 1.40-4.00 4.00-14.00	0.14-0.17 0.11-0.13 0.09-0.17	0.0-2.9 0.0-2.9 0.0-2.9	1.0-2.0 0.0-0.5 0.0-0.5	.37 .24 .43	.37 .24 .43	5	4L	86
0882: Duffer-----	0-25 25-60	27-35 20-35	1.30-1.45 1.35-1.55	1.40-4.00 1.40-4.00	0.19-0.21 0.19-0.21	3.0-5.9 3.0-5.9	1.0-3.0 0.0-0.5	.43 .43	.43 .43	5	4L	86
Kolda-----	0-4 4-11 11-60	18-25 22-27 40-50	1.20-1.40 1.30-1.50 1.40-1.60	4.00-14.00 4.00-14.00 0.42-1.40	0.19-0.21 0.19-0.21 0.14-0.17	3.0-5.9 3.0-5.9 6.0-8.9	3.0-4.0 1.0-3.0 0.0-1.0	.55 .55 .24	.55 .55 .24	5	4L	86
0894: Zerk-----	0-2 2-16 16-60	12-17 12-17 0-10	1.35-1.55 1.35-1.55 1.50-1.65	14.00-42.00 14.00-42.00 42.00-141.0	0.08-0.11 0.11-0.13 0.03-0.05	0.0-2.9 0.0-2.9 0.0-2.9	0.5-1.0 0.0-0.5 0.0-0.5	.17 .17 .05	.32 .37 .17	2	4	86
Threesee-----	0-3 3-14 14-46 46-60	10-18 10-20 4-10 2-8	1.40-1.60 1.45-1.65 1.55-1.75 1.55-1.75	14.00-42.00 4.00-14.00 42.00-141.0 141.0-705.0	0.04-0.08 0.13-0.15 0.03-0.05 0.03-0.05	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	1.0-2.0 0.5-1.0 0.0-0.5 0.0-0.5	.10 .24 .10 .05	.32 .37 .24 .10	2	5	56
Mazuma-----	0-15 15-60	10-14 5-15	1.40-1.55 1.45-1.65	4.00-14.00 14.00-42.00	0.19-0.21 0.10-0.14	0.0-2.9 0.0-2.9	0.0-0.5 0.0-0.5	.43 .24	.43 .28	5	4L	86
0900: Zerk-----	0-2 2-16 16-60	12-17 12-17 0-10	1.35-1.55 1.35-1.55 1.50-1.65	14.00-42.00 14.00-42.00 42.00-141.0	0.08-0.11 0.11-0.13 0.03-0.05	0.0-2.9 0.0-2.9 0.0-2.9	0.5-1.0 0.0-0.5 0.0-0.5	.17 .17 .05	.32 .37 .17	2	4	86
Automal-----	0-8 8-49 49-60	15-25 10-20 5-15	1.30-1.50 1.40-1.60 1.50-1.70	4.00-14.00 0.42-1.40 0.42-1.40	0.14-0.18 0.04-0.06 0.03-0.05	0.0-2.9 0.0-2.9 0.0-2.9	1.0-2.0 0.0-1.0 0.0-0.1	.20 .02 .02	.55 .37 .10	5	5	56
Linoyer-----	0-9 9-60	12-18 12-18	1.30-1.50 1.30-1.50	4.00-14.00 4.00-14.00	0.16-0.18 0.15-0.18	0.0-2.9 0.0-2.9	0.5-1.0 0.5-1.0	.49 .49	.49 .49	5	4L	86
0910: Ragtown-----	0-16 16-60	27-35 35-60	1.40-1.60 1.35-1.55	1.40-4.00 0.42-1.40	0.15-0.17 0.14-0.16	3.0-5.9 6.0-8.9	0.0-0.5 0.0-0.5	.37 .32	.37 .32	5	4L	86
Ragtown-----	0-5 5-26 26-60	20-27 25-35 35-45	1.30-1.50 1.40-1.55 1.40-1.60	1.40-4.00 1.40-4.00 0.42-1.40	0.19-0.21 0.17-0.19 0.16-0.19	3.0-5.9 3.0-5.9 6.0-8.9	0.0-0.5 0.0-0.5 0.0-0.5	.43 .32 .32	.43 .32 .32	5	4L	86
0912: Katelana-----	0-5 5-28 28-32 32-60	14-24 18-25 18-25 27-40	1.30-1.45 1.40-1.55 1.40-1.55 1.40-1.55	4.00-14.00 4.00-14.00 4.00-14.00 1.40-4.00	0.19-0.21 0.19-0.21 0.19-0.21 0.19-0.21	3.0-5.9 3.0-5.9 3.0-5.9 6.0-8.9	1.0-2.0 0.0-0.5 0.0-0.5 0.0-0.5	.37 .49 .49 .32	.37 .49 .49 .32	5	4L	86
Katelana-----	0-5 5-28 28-32 32-60	14-24 18-25 18-25 27-40	1.30-1.45 1.40-1.55 1.40-1.55 1.40-1.55	4.00-14.00 4.00-14.00 4.00-14.00 1.40-4.00	0.19-0.21 0.19-0.21 0.19-0.21 0.19-0.21	3.0-5.9 3.0-5.9 3.0-5.9 6.0-8.9	1.0-2.0 0.0-0.5 0.0-0.5 0.0-0.5	.37 .49 .49 .32	.37 .49 .49 .32	5	4L	86
0914: Katelana-----	0-5 5-28 28-32 32-60	14-24 18-25 18-25 27-40	1.30-1.45 1.40-1.55 1.40-1.55 1.40-1.55	4.00-14.00 4.00-14.00 4.00-14.00 1.40-4.00	0.19-0.21 0.19-0.21 0.19-0.21 0.19-0.21	3.0-5.9 3.0-5.9 3.0-5.9 6.0-8.9	1.0-2.0 0.0-0.5 0.0-0.5 0.0-0.5	.37 .49 .49 .32	.37 .49 .49 .32	5	4L	86
Benin-----	0-7 7-60	15-25 40-50	1.30-1.50 1.50-1.70	4.00-14.00 0.01-0.42	0.17-0.19 0.14-0.16	0.0-2.9 6.0-8.9	0.0-0.5 0.0-0.5	.49 .37	.49 .37	3	4L	86

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Sheffit-----	0-4	10-18	1.45-1.65	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.24	.24	2	3	86
	4-60	35-50	1.40-1.60	0.01-0.42	0.14-0.17	6.0-8.9	0.0-0.5	.28	.28			
0917: Katelana-----	0-5	14-24	1.30-1.45	4.00-14.00	0.19-0.21	3.0-5.9	1.0-2.0	.37	.37	5	4L	86
	5-28	18-25	1.40-1.55	4.00-14.00	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	28-32	18-25	1.40-1.55	4.00-14.00	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	32-60	27-40	1.40-1.55	1.40-4.00	0.19-0.21	6.0-8.9	0.0-0.5	.32	.32			
Sheffit-----	0-4	17-27	1.40-1.60	4.00-14.00	0.19-0.21	3.0-5.9	0.5-1.0	.55	.55	5	4L	86
	4-60	35-50	1.40-1.60	0.01-0.42	0.14-0.17	6.0-8.9	0.0-0.5	.28	.28			
Ragtown-----	0-16	27-35	1.40-1.60	1.40-4.00	0.15-0.17	3.0-5.9	0.0-0.5	.37	.37	5	4L	86
	16-60	35-60	1.35-1.55	0.42-1.40	0.14-0.16	6.0-8.9	0.0-0.5	.32	.32			
0918: Katelana-----	0-5	14-24	1.30-1.45	4.00-14.00	0.19-0.21	3.0-5.9	1.0-2.0	.37	.37	5	4L	86
	5-28	18-25	1.40-1.55	4.00-14.00	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	28-32	18-25	1.40-1.55	4.00-14.00	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	32-60	27-40	1.40-1.55	1.40-4.00	0.19-0.21	6.0-8.9	0.0-0.5	.32	.32			
Zorravista-----	0-6	0-5	1.45-1.60	42.00-141.0	0.08-0.10	0.0-2.9	0.5-1.0	.20	.20	5	2	134
	6-60	0-5	1.50-1.65	141.0-705.0	0.05-0.07	0.0-2.9	0.0-0.5	.17	.17			
Playas-----	0-6	27-40	1.50-1.70	0.01-0.42	0.02-0.04	6.0-8.9	0.0-0.1	.37	.37	-	4L	86
	6-60	35-70	1.60-1.80	0.01-0.42	0.02-0.04	6.0-8.9	0.0-0.1	.37	.37			
0930: Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Toano-----	0-9	8-15	1.35-1.55	4.00-14.00	0.14-0.16	0.0-2.9	0.5-1.0	.64	.64	5	4L	86
	9-27	8-15	1.40-1.60	4.00-14.00	0.14-0.16	0.0-2.9	0.0-0.5	.55	.55			
	27-60	8-15	1.40-1.60	4.00-14.00	0.14-0.16	0.0-2.9	0.0-0.5	.55	.55			
Loray-----	0-12	10-15	1.55-1.65	14.00-42.00	0.07-0.09	0.0-2.9	0.5-1.0	.15	.28	2	4	86
	12-60	0-8	1.50-1.65	141.0-705.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
0932: Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Pyrat-----	0-6	12-20	1.40-1.60	14.00-42.00	0.08-0.10	0.0-2.9	1.0-2.0	.15	.28	3	4	86
	6-14	10-18	1.45-1.65	14.00-42.00	0.05-0.08	0.0-2.9	0.5-1.0	.10	.37			
	14-21	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.15	.49			
	21-42	10-18	1.50-1.70	14.00-42.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.37			
	42-60	5-10	1.45-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
0941: Sheffit-----	0-4	17-27	1.40-1.60	4.00-14.00	0.19-0.21	3.0-5.9	0.5-1.0	.55	.55	5	4L	86
	4-60	35-50	1.40-1.60	0.01-0.42	0.14-0.17	6.0-8.9	0.0-0.5	.28	.28			
Sheffit-----	0-10	10-18	1.45-1.65	14.00-42.00	0.13-0.15	0.0-2.9	0.5-1.0	.43	.43	2	3	86
	10-60	35-50	1.35-1.55	0.01-0.42	0.14-0.17	6.0-8.9	0.0-0.5	.28	.28			
Zorravista-----	0-6	0-5	1.45-1.60	42.00-141.0	0.08-0.10	0.0-2.9	0.5-1.0	.20	.20	5	2	134
	6-60	0-5	1.50-1.65	141.0-705.0	0.05-0.07	0.0-2.9	0.0-0.5	.17	.17			
0943: Sheffit-----	0-4	17-27	1.40-1.60	4.00-14.00	0.19-0.21	3.0-5.9	0.5-1.0	.55	.55	5	4L	86
	4-60	35-50	1.40-1.60	0.01-0.42	0.14-0.17	6.0-8.9	0.0-0.5	.28	.28			
Umlerland-----	0-15	40-45	1.20-1.35	1.40-4.00	0.15-0.21	6.0-8.9	0.5-1.0	.37	.37	5	4	86
	15-60	35-50	1.30-1.45	0.01-0.42	0.15-0.21	6.0-8.9	0.5-1.0	.32	.32			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
0960:												
Gravier-----	0-3	8-18	1.45-1.65	14.00-42.00	0.06-0.08	0.0-2.9	0.0-0.5	.10	.24	5	5	56
	3-60	8-18	1.50-1.70	14.00-42.00	0.04-0.10	0.0-2.9	0.0-0.5	.05	.17			
Zerk-----	0-2	12-17	1.35-1.55	14.00-42.00	0.08-0.11	0.0-2.9	0.5-1.0	.17	.32	2	4	86
	2-16	12-17	1.35-1.55	14.00-42.00	0.11-0.13	0.0-2.9	0.0-0.5	.17	.37			
	16-60	0-10	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.17			
0961:												
Gravier-----	0-4	2-8	1.30-1.50	42.00-141.0	0.08-0.10	0.0-2.9	0.0-0.5	.17	.24	4	2	134
	4-50	8-18	1.30-1.50	14.00-42.00	0.04-0.10	0.0-2.9	0.0-0.5	.05	.32			
	50-60	0-5	1.40-1.60	42.00-141.0	0.02-0.04	0.0-2.9	0.0-0.5	.05	.24			
Piltedown-----	0-10	10-18	1.50-1.70	4.00-14.00	0.13-0.15	0.0-2.9	0.0-1.0	.28	.28	5	3	86
	10-60	10-18	1.50-1.70	4.00-14.00	0.13-0.15	0.0-2.9	0.0-0.1	.28	.32			
Zerk-----	0-2	12-17	1.35-1.55	14.00-42.00	0.08-0.11	0.0-2.9	0.5-1.0	.17	.32	2	4	86
	2-16	12-17	1.35-1.55	14.00-42.00	0.11-0.13	0.0-2.9	0.0-0.5	.17	.37			
	16-60	0-10	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.17			
0972:												
Zimbob-----	0-2	10-18	1.15-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.32	1	6	48
	2-11	10-18	1.20-1.40	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.37			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Zimbob-----	0-1	10-18	1.15-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.32	1	6	48
	1-6	10-18	1.20-1.40	4.00-14.00	0.06-0.09	0.0-2.9	0.5-1.0	.10	.32			
	6-10	---	---	0.00-0.01	---	---	---	---	---			
Pookaloo-----	0-2	10-18	1.20-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.20	.43	1	6	48
	2-14	10-18	1.35-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.0-0.5	.20	.55			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
0974:												
Zimbob-----	0-2	10-18	1.15-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.32	1	6	48
	2-11	10-18	1.20-1.40	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.37			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Tecomar-----	0-2	18-27	1.30-1.45	4.00-14.00	0.03-0.06	0.0-2.9	1.0-2.0	.17	.43	1	8	0
	2-14	20-27	1.30-1.45	4.00-14.00	0.04-0.09	0.0-2.9	0.0-0.8	.10	.64			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
Pookaloo-----	0-2	10-18	1.20-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.20	.43	1	6	48
	2-14	10-18	1.35-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.0-0.5	.20	.55			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
0975:												
Zimbob-----	0-2	10-18	1.15-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.32	1	6	48
	2-11	10-18	1.20-1.40	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.37			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Tecomar-----	0-2	18-27	1.30-1.45	4.00-14.00	0.03-0.06	0.0-2.9	1.0-2.0	.17	.43	1	8	0
	2-14	20-27	1.30-1.45	4.00-14.00	0.04-0.09	0.0-2.9	0.0-0.8	.10	.64			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
Tecomar-----	0-2	18-27	1.30-1.45	4.00-14.00	0.03-0.06	0.0-2.9	1.0-2.0	.17	.43	1	8	0
	2-12	20-27	1.30-1.45	4.00-14.00	0.04-0.09	0.0-2.9	0.0-0.8	.10	.64			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
0980:												
Onkeyo-----	0-8	18-27	1.10-1.30	4.00-14.00	0.06-0.13	0.0-2.9	2.0-4.0	.10	.55	1	6	48
	8-17	25-35	1.20-1.40	1.40-4.00	0.04-0.10	0.0-2.9	0.5-1.0	.05	.43			
	17-21	---	---	0.00-0.01	---	---	---	---	---			
Pookaloo-----	0-2	10-18	1.20-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.20	.43	1	6	48
	2-14	10-18	1.35-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.0-0.5	.20	.55			
	14-18	---	---	0.00-0.01	---	---	---	---	---			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Zimbob-----	0-2	10-18	1.15-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.32	1	6	48
	2-11	10-18	1.20-1.40	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.37			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
0990: Hyzen-----	0-3	8-18	1.20-1.40	4.00-14.00	0.06-0.09	0.0-2.9	2.0-5.0	.17	.43	1	8	0
	3-13	10-18	1.20-1.40	4.00-14.00	0.05-0.08	0.0-2.9	2.0-4.0	.15	.43			
	13-17	---	---	0.00-0.01	---	---	---	---	---			
Zimbob-----	0-1	10-18	1.15-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.10	.32	1	6	48
	1-6	10-18	1.20-1.40	4.00-14.00	0.06-0.09	0.0-2.9	0.5-1.0	.10	.32			
	6-10	---	---	0.00-0.01	---	---	---	---	---			
0991: Hyzen-----	0-3	8-18	1.20-1.40	4.00-14.00	0.06-0.09	0.0-2.9	2.0-5.0	.17	.43	1	8	0
	3-13	10-18	1.20-1.40	4.00-14.00	0.05-0.08	0.0-2.9	2.0-4.0	.15	.43			
	13-17	---	---	0.00-0.01	---	---	---	---	---			
Cavehill-----	0-12	18-27	1.05-1.20	4.00-14.00	0.12-0.14	0.0-2.9	4.0-6.0	.15	.43	2	6	48
	12-30	18-27	1.10-1.30	4.00-14.00	0.08-0.11	0.0-2.9	1.0-2.0	.17	.43			
	30-34	---	---	0.00-0.01	---	---	---	---	---			
Tecomar-----	0-2	18-27	1.30-1.45	4.00-14.00	0.03-0.06	0.0-2.9	1.0-2.0	.17	.43	1	8	0
	2-14	20-27	1.30-1.45	4.00-14.00	0.04-0.09	0.0-2.9	0.0-0.8	.10	.64			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
1000: Pyrat-----	0-6	12-20	1.40-1.60	14.00-42.00	0.08-0.10	0.0-2.9	1.0-2.0	.15	.28	3	4	86
	6-14	10-18	1.45-1.65	14.00-42.00	0.05-0.08	0.0-2.9	0.5-1.0	.10	.37			
	14-21	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.15	.49			
	21-42	10-18	1.50-1.70	14.00-42.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.37			
	42-60	5-10	1.45-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Zerk-----	0-2	12-17	1.35-1.55	14.00-42.00	0.08-0.11	0.0-2.9	0.5-1.0	.17	.32	2	4	86
	2-16	12-17	1.35-1.55	14.00-42.00	0.11-0.13	0.0-2.9	0.0-0.5	.17	.37			
	16-60	0-10	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.17			
1001: Pyrat-----	0-6	12-20	1.40-1.60	14.00-42.00	0.08-0.10	0.0-2.9	1.0-2.0	.15	.28	3	4	86
	6-14	10-18	1.45-1.65	14.00-42.00	0.05-0.08	0.0-2.9	0.5-1.0	.10	.37			
	14-21	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.15	.49			
	21-42	10-18	1.50-1.70	14.00-42.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.37			
	42-60	5-10	1.45-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Eastwell-----	0-5	10-18	1.25-1.40	14.00-42.00	0.13-0.15	0.0-2.9	1.0-2.0	.24	.43	2	4	86
	5-18	10-27	1.30-1.50	4.00-14.00	0.08-0.11	0.0-2.9	0.5-2.0	.24	.32			
	18-27	---	---	0.42-1.40	---	---	---	---	---			
	27-60	10-20	1.35-1.55	14.00-42.00	0.08-0.11	0.0-2.9	0.0-0.5	.24	.43			
1002: Threesee-----	0-3	4-10	1.45-1.65	42.00-141.0	0.03-0.05	0.0-2.9	1.0-2.0	.05	.15	2	4	86
	3-14	10-20	1.45-1.65	4.00-14.00	0.13-0.15	0.0-2.9	0.5-1.0	.24	.37			
	14-46	4-10	1.55-1.75	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.24			
	46-60	2-8	1.55-1.75	141.0-705.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.10			
Kunzler-----	0-5	12-20	1.15-1.35	4.00-14.00	0.14-0.17	0.0-2.9	1.0-2.0	.37	.37	5	41	86
	5-48	10-18	1.35-1.60	1.40-4.00	0.11-0.13	0.0-2.9	0.0-0.5	.24	.24			
	48-60	10-18	1.30-1.60	4.00-14.00	0.09-0.17	0.0-2.9	0.0-0.5	.43	.43			
Threesee-----	0-3	10-18	1.40-1.60	14.00-42.00	0.04-0.08	0.0-2.9	1.0-2.0	.10	.32	2	5	56
	3-14	10-20	1.45-1.65	4.00-14.00	0.13-0.15	0.0-2.9	0.5-1.0	.24	.37			
	14-46	4-10	1.55-1.75	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.24			
	46-60	2-8	1.55-1.75	141.0-705.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.10			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
1003: Pyrat-----	0-6	12-20	1.40-1.60	14.00-42.00	0.08-0.10	0.0-2.9	1.0-2.0	.15	.28	3	4	86
	6-14	10-18	1.45-1.65	14.00-42.00	0.05-0.08	0.0-2.9	0.5-1.0	.10	.37			
	14-21	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.15	.49			
	21-42	10-18	1.50-1.70	14.00-42.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.37			
	42-60	5-10	1.45-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Hundraw-----	0-5	8-18	1.40-1.55	14.00-42.00	0.10-0.13	0.0-2.9	0.5-1.0	.15	.28	1	4	86
	5-10	8-18	1.40-1.55	4.00-14.00	0.12-0.17	0.0-2.9	0.0-0.5	.20	.32			
	10-14	---	---	0.01-0.42	---	---	---	---	---			
Tulase-----	0-2	8-18	1.35-1.50	4.00-14.00	0.15-0.17	0.0-2.9	1.0-2.0	.43	.43	5	3	86
	2-60	8-18	1.30-1.50	4.00-14.00	0.15-0.21	0.0-2.9	0.5-2.0	.55	.55			
1004: Pyrat-----	0-6	12-20	1.40-1.60	14.00-42.00	0.08-0.10	0.0-2.9	1.0-2.0	.15	.28	3	4	86
	6-14	10-18	1.45-1.65	14.00-42.00	0.05-0.08	0.0-2.9	0.5-1.0	.10	.37			
	14-21	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.15	.49			
	21-42	10-18	1.50-1.70	14.00-42.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.37			
	42-60	5-10	1.45-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Parisa-----	0-5	8-18	1.50-1.65	4.00-14.00	0.10-0.15	0.0-2.9	1.0-2.0	.20	.37	2	5	56
	5-36	8-18	1.50-1.70	4.00-14.00	0.04-0.12	0.0-2.9	0.5-1.0	.10	.37			
	36-55	---	---	0.00-0.01	---	---	---	---	---			
	55-60	0-8	1.60-1.75	42.00-141.0	0.03-0.11	0.0-2.9	0.0-0.5	.02	.15			
Tulase-----	0-2	8-18	1.35-1.50	4.00-14.00	0.15-0.17	0.0-2.9	1.0-2.0	.43	.43	5	3	86
	2-60	8-18	1.30-1.50	4.00-14.00	0.15-0.21	0.0-2.9	0.5-2.0	.55	.55			
1005: Pyrat-----	0-6	12-20	1.40-1.60	14.00-42.00	0.08-0.10	0.0-2.9	1.0-2.0	.15	.28	3	4	86
	6-14	10-18	1.45-1.65	14.00-42.00	0.05-0.08	0.0-2.9	0.5-1.0	.10	.37			
	14-21	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.15	.49			
	21-42	10-18	1.50-1.70	14.00-42.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.37			
	42-60	5-10	1.45-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Zerk-----	0-2	12-17	1.35-1.55	14.00-42.00	0.09-0.12	0.0-2.9	0.0-0.8	.17	.28	2	4	86
	2-16	12-17	1.35-1.55	14.00-42.00	0.11-0.13	0.0-2.9	0.0-0.5	.17	.37			
	16-60	0-10	1.50-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.17			
Parisa-----	0-5	8-18	1.50-1.65	4.00-14.00	0.10-0.15	0.0-2.9	1.0-2.0	.20	.37	2	5	56
	5-36	8-18	1.50-1.70	4.00-14.00	0.04-0.12	0.0-2.9	0.5-1.0	.10	.37			
	36-55	---	---	0.00-0.01	---	---	---	---	---			
	55-60	0-8	1.60-1.75	42.00-141.0	0.03-0.11	0.0-2.9	0.0-0.5	.02	.15			
1006: Pyrat-----	0-6	12-20	1.40-1.60	14.00-42.00	0.08-0.10	0.0-2.9	1.0-2.0	.15	.28	3	4	86
	6-14	10-18	1.45-1.65	14.00-42.00	0.05-0.08	0.0-2.9	0.5-1.0	.10	.37			
	14-21	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.15	.49			
	21-42	10-18	1.50-1.70	14.00-42.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.37			
	42-60	5-10	1.45-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Blimo-----	0-7	12-18	1.35-1.55	4.00-14.00	0.10-0.12	0.0-2.9	1.0-2.0	.28	.43	4	3	86
	7-25	12-18	1.45-1.65	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.5	.10	.37			
	25-40	12-18	1.45-1.65	0.42-1.40	0.07-0.09	0.0-2.9	0.0-0.5	.24	.37			
	40-60	4-12	1.50-1.70	14.00-42.00	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
1007: Pyrat-----	0-6	12-20	1.40-1.60	14.00-42.00	0.08-0.10	0.0-2.9	1.0-2.0	.15	.28	3	4	86
	6-14	10-18	1.45-1.65	14.00-42.00	0.05-0.08	0.0-2.9	0.5-1.0	.10	.37			
	14-21	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.15	.49			
	21-42	10-18	1.50-1.70	14.00-42.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.37			
	42-60	5-10	1.45-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Automal-----	0-8	15-25	1.30-1.50	4.00-14.00	0.14-0.18	0.0-2.9	1.0-2.0	.20	.55	5	5	56
	8-49	10-20	1.40-1.60	0.42-1.40	0.04-0.06	0.0-2.9	0.0-1.0	.02	.37			
	49-60	5-15	1.50-1.70	0.42-1.40	0.03-0.05	0.0-2.9	0.0-0.1	.02	.10			
Parisa-----	0-5	8-18	1.50-1.65	4.00-14.00	0.10-0.15	0.0-2.9	1.0-2.0	.20	.37	2	5	56
	5-36	8-18	1.50-1.70	4.00-14.00	0.04-0.12	0.0-2.9	0.5-1.0	.10	.37			
	36-55	---	---	0.00-0.01	---	---	---	---	---			
	55-60	0-8	1.60-1.75	42.00-141.0	0.03-0.11	0.0-2.9	0.0-0.5	.02	.15			
1009:												
Fyrat-----	0-6	12-20	1.40-1.60	14.00-42.00	0.08-0.10	0.0-2.9	1.0-2.0	.15	.28	3	4	86
	6-14	10-18	1.45-1.65	14.00-42.00	0.05-0.08	0.0-2.9	0.5-1.0	.10	.37			
	14-21	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.15	.49			
	21-42	10-18	1.50-1.70	14.00-42.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.37			
	42-60	5-10	1.45-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Tulase-----	0-2	8-18	1.35-1.50	4.00-14.00	0.15-0.17	0.0-2.9	1.0-2.0	.43	.43	5	3	86
	2-60	8-18	1.30-1.50	4.00-14.00	0.15-0.21	0.0-2.9	0.5-2.0	.55	.55			
Wintermute-----	0-3	8-18	1.35-1.55	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.8	.28	.55	3	5	56
	3-15	8-18	1.40-1.60	4.00-14.00	0.10-0.16	0.0-2.9	0.0-0.5	.28	.49			
	15-53	8-18	1.45-1.65	0.42-1.40	0.03-0.07	0.0-2.9	0.0-0.5	.05	.37			
	53-60	27-35	1.40-1.60	0.42-1.40	0.12-0.18	3.0-5.9	0.0-0.5	.17	.55			
1020:												
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Eastwell-----	0-5	10-18	1.25-1.40	14.00-42.00	0.13-0.15	0.0-2.9	1.0-2.0	.24	.43	2	4	86
	5-18	10-27	1.30-1.50	4.00-14.00	0.08-0.11	0.0-2.9	0.5-2.0	.24	.32			
	18-27	---	---	0.42-1.40	---	---	---	---	---			
	27-60	10-20	1.35-1.55	14.00-42.00	0.08-0.11	0.0-2.9	0.0-0.5	.24	.43			
Blimo-----	0-7	12-18	1.25-1.45	1.40-4.00	0.19-0.21	0.0-2.9	1.0-2.0	.43	.43	4	4L	86
	7-25	12-18	1.45-1.65	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.5	.10	.37			
	25-40	12-18	1.45-1.65	0.42-1.40	0.07-0.09	0.0-2.9	0.0-0.5	.24	.37			
	40-60	4-12	1.50-1.70	14.00-42.00	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
1023:												
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Katelana-----	0-5	14-24	1.30-1.45	4.00-14.00	0.19-0.21	3.0-5.9	1.0-2.0	.37	.37	5	4L	86
	5-28	18-25	1.40-1.55	4.00-14.00	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	28-32	18-25	1.40-1.55	4.00-14.00	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	32-60	27-40	1.40-1.55	1.40-4.00	0.19-0.21	6.0-8.9	0.0-0.5	.32	.32			
1030:												
Segura-----	0-2	20-27	1.35-1.55	4.00-14.00	0.10-0.12	3.0-5.9	1.0-3.0	.15	.37	1	7	38
	2-11	20-35	1.40-1.60	4.00-14.00	0.14-0.16	3.0-5.9	1.0-2.0	.24	.43			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Bullump-----	0-10	15-25	1.10-1.20	4.00-14.00	0.08-0.12	0.0-2.9	2.0-6.0	.15	.43	3	7	38
	10-49	25-35	1.35-1.45	1.40-4.00	0.09-0.14	0.0-2.9	0.5-3.0	.10	.32			
	49-53	---	---	0.00-0.01	---	---	---	---	---			
Hutchley-----	0-4	12-25	1.15-1.25	4.00-14.00	0.09-0.12	0.0-2.9	2.0-3.0	.10	.28	1	7	38
	4-13	28-35	1.40-1.50	1.40-4.00	0.09-0.11	3.0-5.9	1.0-2.0	.10	.43			
	13-17	---	---	0.00-0.01	---	---	---	---	---			
1040:												
Segura-----	0-2	15-20	1.35-1.55	4.00-14.00	0.08-0.12	3.0-5.9	1.0-3.0	.10	.37	1	7	38
	2-11	20-35	1.40-1.60	4.00-14.00	0.14-0.16	3.0-5.9	1.0-2.0	.24	.43			
	11-15	---	---	0.00-0.01	---	---	---	---	---			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	KE	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Pioche-----	0-2	8-12	1.40-1.60	14.00-42.00	0.06-0.08	0.0-2.9	1.0-3.0	.05	.28	1	5	56
	2-12	35-50	1.40-1.55	0.42-1.40	0.10-0.12	3.0-5.9	1.0-2.0	.15	.37			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
Chen-----	0-3	20-27	1.10-1.25	4.00-14.00	0.08-0.12	0.0-2.9	2.0-3.0	.10	.32	1	7	38
	3-16	40-55	1.25-1.40	0.01-0.42	0.05-0.09	3.0-5.9	0.5-2.0	.10	.49			
	16-20	---	---	0.00-0.01	---	---	---	---	---			
1061: Pioche-----	0-2	8-12	1.40-1.60	14.00-42.00	0.06-0.08	0.0-2.9	1.0-3.0	.05	.28	1	5	56
	2-12	35-50	1.40-1.55	0.42-1.40	0.10-0.12	3.0-5.9	1.0-2.0	.15	.37			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
Cucamungo-----	0-3	10-18	1.30-1.50	14.00-42.00	0.05-0.07	0.0-2.9	2.0-4.0	.05	.32	2	7	38
	3-14	20-30	1.20-1.40	4.00-14.00	0.07-0.09	0.0-2.9	1.0-2.0	.05	.37			
	14-19	---	---	0.01-0.42	---	---	---	---	---			
Rock Outcrop----	---	---	---	---	---	---	---	---	---	-	---	---
1070: Zafod-----	0-7	5-15	1.45-1.65	14.00-42.00	0.07-0.09	0.0-2.9	1.0-2.0	.17	.20	3	4	86
	7-28	5-15	1.50-1.70	42.00-141.0	0.04-0.07	0.0-2.9	0.5-1.0	.10	.20			
	28-38	---	---	0.42-1.40	---	---	---	---	---			
	38-60	2-8	1.60-1.80	42.00-141.0	0.02-0.03	0.0-2.9	0.0-0.5	.02	.10			
Automal-----	0-8	10-20	1.35-1.55	4.00-14.00	0.08-0.10	0.0-2.9	1.0-2.0	.10	.32	5	4	86
	8-49	10-20	1.40-1.60	0.42-1.40	0.04-0.06	0.0-2.9	0.0-1.0	.02	.37			
	49-60	5-15	1.50-1.70	0.42-1.40	0.03-0.05	0.0-2.9	0.0-0.1	.02	.10			
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
1080: Cotant-----	0-2	27-40	1.10-1.30	1.40-4.00	0.13-0.16	3.0-5.9	1.0-2.0	.20	.37	2	5	56
	2-15	40-60	1.25-1.45	0.42-1.40	0.14-0.16	6.0-8.9	0.5-2.0	.24	.28			
	15-19	---	---	0.01-0.42	---	---	---	---	---			
Segura-----	0-2	15-20	1.35-1.55	4.00-14.00	0.08-0.12	3.0-5.9	1.0-3.0	.10	.37	1	7	38
	2-11	20-35	1.40-1.60	4.00-14.00	0.14-0.16	3.0-5.9	1.0-2.0	.24	.43			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
1111: Parisa-----	0-5	8-18	1.50-1.65	4.00-14.00	0.10-0.15	0.0-2.9	1.0-2.0	.20	.37	2	5	56
	5-36	8-18	1.50-1.70	4.00-14.00	0.04-0.12	0.0-2.9	0.5-1.0	.10	.37			
	36-55	---	---	0.00-0.01	---	---	---	---	---			
	55-60	0-8	1.60-1.75	42.00-141.0	0.03-0.11	0.0-2.9	0.0-0.5	.02	.15			
1120: Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Automal-----	0-8	15-25	1.30-1.50	4.00-14.00	0.14-0.18	0.0-2.9	1.0-2.0	.20	.55	5	5	56
	8-49	10-20	1.40-1.60	0.42-1.40	0.04-0.06	0.0-2.9	0.0-1.0	.02	.37			
	49-60	5-15	1.50-1.70	0.42-1.40	0.03-0.05	0.0-2.9	0.0-0.1	.02	.10			
1150: Adobe-----	0-7	18-27	1.25-1.45	4.00-14.00	0.08-0.14	0.0-2.9	2.0-4.0	.15	.49	1	6	48
	7-11	18-27	1.35-1.55	4.00-14.00	0.08-0.14	0.0-2.9	0.5-3.0	.15	.37			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Wardbay-----	0-14	18-27	1.05-1.20	4.00-14.00	0.06-0.12	0.0-2.9	2.0-4.0	.10	.37	3	6	48
	14-55	18-27	1.10-1.30	4.00-14.00	0.03-0.08	0.0-2.9	1.0-2.0	.05	.55			
	55-59	---	---	0.00-0.01	---	---	---	---	---			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Haunchee-----	0-4	10-20	1.05-1.25	4.00-14.00	0.09-0.11	0.0-2.9	3.0-5.0	.15	.43	1	6	48
	4-11	10-20	1.05-1.25	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.15	.55			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
1161: Pharo-----	0-13	15-20	1.40-1.60	4.00-14.00	0.11-0.14	0.0-2.9	2.0-4.0	.20	.32	2	5	56
	13-36	10-20	1.50-1.65	4.00-14.00	0.05-0.09	0.0-2.9	0.5-1.0	.10	.28			
	36-60	2-8	1.60-1.75	141.0-705.0	0.01-0.02	0.0-2.9	0.0-0.5	.02	.10			
Bobs-----	0-8	10-20	1.15-1.35	4.00-14.00	0.15-0.17	0.0-2.9	1.0-3.0	.37	.43	1	5	56
	8-13	10-20	1.25-1.45	4.00-14.00	0.14-0.17	0.0-2.9	1.0-2.0	.37	.49			
	13-17	---	---	0.00-0.01	---	---	---	---	---			
Pookaloo-----	0-2	10-18	1.20-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.20	.43	1	6	48
	2-14	10-18	1.35-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.0-0.5	.20	.55			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
1171: Pyrat-----	0-6	12-20	1.40-1.60	14.00-42.00	0.08-0.10	0.0-2.9	1.0-2.0	.15	.28	3	4	86
	6-14	10-18	1.45-1.65	14.00-42.00	0.05-0.08	0.0-2.9	0.5-1.0	.10	.37			
	14-21	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.15	.49			
	21-42	10-18	1.50-1.70	14.00-42.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.37			
	42-60	5-10	1.45-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Automal-----	0-8	18-25	1.30-1.50	4.00-14.00	0.11-0.15	0.0-2.9	1.0-2.0	.20	.43	5	5	56
	8-49	10-20	1.40-1.60	0.42-1.40	0.04-0.06	0.0-2.9	0.0-1.0	.02	.37			
	49-60	5-15	1.50-1.70	0.42-1.40	0.03-0.05	0.0-2.9	0.0-0.1	.02	.10			
Gravier-----	0-3	8-18	1.45-1.65	14.00-42.00	0.06-0.08	0.0-2.9	0.0-0.5	.10	.24	5	5	56
	3-60	8-18	1.50-1.70	14.00-42.00	0.04-0.10	0.0-2.9	0.0-0.5	.05	.17			
1172: Pyrat-----	0-6	10-18	1.40-1.60	14.00-42.00	0.06-0.09	0.0-2.9	1.0-2.0	.05	.37	3	5	56
	6-14	10-18	1.45-1.65	14.00-42.00	0.05-0.08	0.0-2.9	0.5-1.0	.10	.37			
	14-21	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.5-1.0	.15	.43			
	21-42	10-18	1.50-1.70	14.00-42.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.37			
	42-60	5-10	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
Automal-----	0-8	10-18	1.40-1.55	14.00-42.00	0.06-0.09	0.0-2.9	1.0-2.0	.05	.32	5	5	56
	8-49	10-20	1.40-1.60	0.42-1.40	0.04-0.06	0.0-2.9	0.5-1.0	.02	.37			
	49-60	5-15	1.50-1.70	14.00-42.00	0.03-0.05	0.0-2.9	0.0-0.5	.02	.20			
Automal-----	0-8	18-25	1.30-1.50	4.00-14.00	0.11-0.15	0.0-2.9	1.0-2.0	.20	.43	5	5	56
	8-49	10-20	1.40-1.60	0.42-1.40	0.04-0.06	0.0-2.9	0.0-1.0	.02	.37			
	49-60	5-15	1.50-1.70	0.42-1.40	0.03-0.05	0.0-2.9	0.0-0.1	.02	.10			
1173: Pyrat-----	0-6	8-18	1.40-1.60	4.00-14.00	0.13-0.15	0.0-2.9	1.0-2.0	.20	.37	3	5	56
	6-14	10-18	1.45-1.65	14.00-42.00	0.05-0.08	0.0-2.9	0.5-1.0	.10	.37			
	14-21	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.15	.49			
	21-42	10-18	1.50-1.70	14.00-42.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.37			
	42-60	5-10	1.45-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Automal-----	0-8	15-25	1.30-1.50	4.00-14.00	0.14-0.18	0.0-2.9	1.0-2.0	.20	.55	5	5	56
	8-49	10-20	1.40-1.60	0.42-1.40	0.04-0.06	0.0-2.9	0.0-1.0	.02	.37			
	49-60	5-15	1.50-1.70	0.42-1.40	0.03-0.05	0.0-2.9	0.0-0.1	.02	.10			
1174: Pyrat-----	0-6	12-20	1.40-1.60	14.00-42.00	0.08-0.10	0.0-2.9	1.0-2.0	.15	.28	3	4	86
	6-14	10-18	1.45-1.65	14.00-42.00	0.05-0.08	0.0-2.9	0.5-1.0	.10	.37			
	14-21	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.15	.49			
	21-42	10-18	1.50-1.70	14.00-42.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.37			
	42-60	5-10	1.45-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
Tosser-----	0-10	5-15	1.30-1.40	14.00-42.00	0.04-0.08	0.0-2.9	1.0-2.0	.10	.24	2	4L	86
	10-16	2-8	1.30-1.50	42.00-141.0	0.03-0.06	0.0-2.9	0.0-1.0	.05	.15			
	16-26	2-8	1.50-1.80	42.00-141.0	0.02-0.04	0.0-2.9	0.0-1.0	.02	.15			
	26-60	2-8	1.50-1.80	14.00-42.00	0.04-0.07	0.0-2.9	0.0-1.0	.10	.15			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
1180:												
Haunchee-----	0-4	10-20	1.05-1.25	4.00-14.00	0.09-0.11	0.0-2.9	3.0-5.0	.15	.43	1	6	48
	4-11	10-20	1.05-1.25	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.15	.55			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Cavehill-----	0-12	18-27	1.05-1.20	4.00-14.00	0.09-0.13	0.0-2.9	4.0-6.0	.17	.43	2	5	56
	12-30	18-27	1.10-1.30	4.00-14.00	0.08-0.11	0.0-2.9	1.0-2.0	.17	.43			
	30-34	---	---	0.00-0.01	---	---	---	---	---			
1181:												
Haunchee-----	0-4	10-20	1.05-1.25	4.00-14.00	0.09-0.11	0.0-2.9	3.0-5.0	.15	.49	1	6	48
	4-11	10-20	1.05-1.25	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.15	.55			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Halacan-----	0-5	10-18	1.25-1.40	14.00-42.00	0.08-0.11	0.0-2.9	1.0-2.0	.17	.55	1	6	48
	5-12	10-18	1.10-1.30	14.00-42.00	0.04-0.09	0.0-2.9	0.5-2.0	.05	.43			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
Wardbay-----	0-14	18-27	1.05-1.20	4.00-14.00	0.06-0.12	0.0-2.9	2.0-4.0	.10	.37	3	6	48
	14-55	18-27	1.10-1.30	4.00-14.00	0.03-0.08	0.0-2.9	1.0-2.0	.05	.55			
	55-59	---	---	0.00-0.01	---	---	---	---	---			
1190:												
Upatad-----	0-2	18-27	1.15-1.35	4.00-14.00	0.08-0.14	0.0-2.9	2.0-4.0	.15	.49	1	7	38
	2-14	27-35	1.25-1.45	1.40-4.00	0.08-0.14	0.0-2.9	1.0-2.0	.10	.49			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
Atlow-----	0-5	15-25	1.15-1.35	4.00-14.00	0.06-0.08	0.0-2.9	1.0-2.0	.17	.55	1	7	38
	5-18	27-35	1.30-1.50	1.40-4.00	0.08-0.10	0.0-2.9	0.0-0.5	.17	.43			
	18-22	---	---	0.00-0.01	---	---	---	---	---			
Upatad-----	0-1	18-27	1.25-1.45	4.00-14.00	0.06-0.09	0.0-2.9	2.0-4.0	.05	.43	1	8	0
	1-12	27-35	1.35-1.55	1.40-4.00	0.08-0.14	0.0-2.9	1.0-2.0	.10	.49			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
1191:												
Upatad-----	0-2	18-27	1.15-1.35	4.00-14.00	0.08-0.14	0.0-2.9	2.0-4.0	.15	.49	1	7	38
	2-14	27-35	1.25-1.45	1.40-4.00	0.08-0.14	0.0-2.9	1.0-2.0	.10	.49			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
Pioche-----	0-2	8-12	1.40-1.60	14.00-42.00	0.06-0.08	0.0-2.9	1.0-3.0	.05	.28	1	5	56
	2-12	35-50	1.40-1.55	0.42-1.40	0.10-0.12	3.0-5.9	1.0-2.0	.15	.37			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
Rock Outcrop----	---	---	---	---	---	---	---	---	---	-	---	---
1200:												
Hardol-----	0-13	18-27	1.10-1.30	4.00-14.00	0.07-0.13	0.0-2.9	2.0-3.0	.28	.64	5	6	48
	13-37	20-27	1.10-1.30	4.00-14.00	0.03-0.08	0.0-2.9	1.0-3.0	.10	.64			
	37-60	20-27	1.10-1.30	4.00-14.00	0.03-0.07	0.0-2.9	1.0-2.0	.10	.43			
Hardzem-----	0-5	10-20	1.40-1.60	4.00-14.00	0.10-0.15	0.0-2.9	1.0-2.0	.20	.37	3	6	48
	5-28	20-30	1.40-1.60	0.42-1.40	0.05-0.11	0.0-2.9	1.0-2.0	.05	.43			
	28-55	---	---	0.01-0.42	---	---	---	---	---			
Rock Outcrop----	---	---	---	---	---	---	---	---	---	-	---	---
1201:												
Hardol-----	0-13	18-27	1.10-1.30	4.00-14.00	0.07-0.13	0.0-2.9	2.0-3.0	.28	.64	5	6	48
	13-37	20-27	1.10-1.30	4.00-14.00	0.03-0.08	0.0-2.9	1.0-3.0	.10	.64			
	37-60	20-27	1.10-1.30	4.00-14.00	0.03-0.07	0.0-2.9	1.0-2.0	.10	.43			
Rock Outcrop----	---	---	---	---	---	---	---	---	---	-	---	---
Wardbay-----	0-14	18-27	1.05-1.20	4.00-14.00	0.06-0.12	0.0-2.9	2.0-4.0	.10	.37	3	6	48
	14-55	18-27	1.10-1.30	4.00-14.00	0.03-0.08	0.0-2.9	1.0-2.0	.05	.55			
	55-59	---	---	0.00-0.01	---	---	---	---	---			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
1210: Blimo-----	0-8	12-18	1.35-1.55	4.00-14.00	0.12-0.16	0.0-2.9	1.0-2.0	.20	.37	5	5	56
	8-21	12-18	1.40-1.60	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.5	.10	.32			
	21-36	12-18	1.40-1.60	0.42-1.40	0.07-0.09	0.0-2.9	0.0-0.5	.24	.32			
	36-60	12-18	1.40-1.60	0.42-1.40	0.10-0.14	0.0-2.9	0.0-0.5	.28	.32			
Kunzler-----	0-5	12-20	1.15-1.35	4.00-14.00	0.14-0.17	0.0-2.9	1.0-2.0	.37	.37	5	4L	86
	5-48	10-18	1.35-1.60	1.40-4.00	0.11-0.13	0.0-2.9	0.0-0.5	.24	.24			
	48-60	10-18	1.30-1.60	4.00-14.00	0.09-0.17	0.0-2.9	0.0-0.5	.43	.43			
Linoyer-----	0-9	12-18	1.30-1.50	4.00-14.00	0.16-0.18	0.0-2.9	0.5-1.0	.49	.49	5	4L	86
	9-60	12-18	1.30-1.50	4.00-14.00	0.15-0.18	0.0-2.9	0.5-1.0	.49	.49			
1213: Blimo-----	0-8	12-18	1.40-1.60	4.00-14.00	0.10-0.12	0.0-2.9	1.0-2.0	.28	.32	5	3	86
	8-21	12-18	1.40-1.60	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.5	.10	.32			
	21-36	12-18	1.40-1.60	0.42-1.40	0.07-0.09	0.0-2.9	0.0-0.5	.24	.32			
	36-60	12-18	1.40-1.60	0.42-1.40	0.10-0.14	0.0-2.9	0.0-0.5	.28	.32			
Threesee-----	0-3	10-20	1.40-1.60	4.00-14.00	0.13-0.14	0.0-2.9	1.0-2.0	.24	.43	2	5	56
	3-14	10-20	1.45-1.65	4.00-14.00	0.13-0.14	0.0-2.9	0.5-1.0	.20	.37			
	14-46	4-10	1.55-1.75	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.24			
	46-60	2-8	1.55-1.75	141.0-705.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.10			
1215: Blimo-----	0-8	12-18	1.40-1.60	4.00-14.00	0.10-0.12	0.0-2.9	1.0-2.0	.28	.32	5	3	86
	8-21	12-18	1.40-1.60	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.5	.10	.32			
	21-36	12-18	1.40-1.60	0.42-1.40	0.07-0.09	0.0-2.9	0.0-0.5	.24	.32			
	36-60	12-18	1.40-1.60	0.42-1.40	0.10-0.14	0.0-2.9	0.0-0.5	.28	.32			
Zorravista-----	0-6	0-5	1.45-1.60	42.00-141.0	0.08-0.10	0.0-2.9	0.5-1.0	.20	.20	5	2	134
	6-60	0-5	1.50-1.65	141.0-705.0	0.05-0.07	0.0-2.9	0.0-0.5	.17	.17			
1216: Blimo-----	0-8	12-18	1.40-1.60	4.00-14.00	0.10-0.12	0.0-2.9	1.0-2.0	.28	.32	5	3	86
	8-21	12-18	1.40-1.60	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.5	.10	.32			
	21-36	12-18	1.40-1.60	0.42-1.40	0.07-0.09	0.0-2.9	0.0-0.5	.24	.32			
	36-60	12-18	1.40-1.60	0.42-1.40	0.10-0.14	0.0-2.9	0.0-0.5	.28	.32			
Idway-----	0-4	8-18	1.50-1.70	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.24	.32	5	3	86
	4-12	8-18	1.50-1.70	14.00-42.00	0.10-0.12	0.0-2.9	0.0-0.5	.24	.32			
	12-27	8-18	1.55-1.70	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.43	.43			
	27-60	2-8	1.60-1.75	42.00-141.0	0.04-0.05	0.0-2.9	0.0-0.5	.05	.15			
Mazuma-----	0-15	10-14	1.40-1.55	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43	5	4L	86
	15-60	5-15	1.45-1.65	14.00-42.00	0.10-0.14	0.0-2.9	0.0-0.5	.24	.28			
1220: Onkeyo-----	0-8	18-27	1.10-1.30	4.00-14.00	0.06-0.13	0.0-2.9	2.0-4.0	.10	.55	1	6	48
	8-17	25-35	1.20-1.40	1.40-4.00	0.04-0.10	0.0-2.9	0.5-1.0	.05	.43			
	17-21	---	---	0.00-0.01	---	---	---	---	---			
Adobe-----	0-7	18-27	1.25-1.45	4.00-14.00	0.08-0.14	0.0-2.9	2.0-4.0	.15	.49	1	6	48
	7-11	18-27	1.35-1.55	4.00-14.00	0.08-0.14	0.0-2.9	0.5-3.0	.15	.37			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Pookaloo-----	0-2	10-18	1.20-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.20	.43	1	6	48
	2-14	10-18	1.35-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.0-0.5	.20	.55			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
1230: Hardzem-----	0-5	10-20	1.40-1.60	4.00-14.00	0.08-0.11	0.0-2.9	1.0-2.0	.05	.43	3	7	38
	5-28	20-30	1.40-1.60	0.42-1.40	0.05-0.11	0.0-2.9	1.0-2.0	.05	.43			
	28-55	---	---	0.01-0.42	---	---	---	---	---			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
		Pct	g/cc	um/sec	In/in	Pct	Pct	K	Kf	T		
Haunchee-----	0-4	10-20	1.05-1.25	4.00-14.00	0.09-0.11	0.0-2.9	3.0-5.0	.15	.49	1	6	48
	4-11	10-20	1.05-1.25	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.15	.55			
	11-15	---	---	0.00-0.01	---	---	---	---	---			
Wardbay-----	0-14	18-27	1.05-1.20	4.00-14.00	0.06-0.12	0.0-2.9	2.0-4.0	.10	.37	3	6	48
	14-55	18-27	1.10-1.30	4.00-14.00	0.03-0.08	0.0-2.9	1.0-2.0	.05	.55			
	55-59	---	---	0.00-0.01	---	---	---	---	---			
1240: Benin-----	0-7	30-40	1.30-1.50	0.42-1.40	0.19-0.21	6.0-8.9	0.0-0.5	.37	.37	5	4L	86
	7-60	40-50	1.50-1.70	0.01-0.42	0.14-0.16	6.0-8.9	0.0-0.5	.37	.37			
Benin-----	0-7	15-25	1.30-1.50	4.00-14.00	0.17-0.19	0.0-2.9	0.0-0.5	.49	.49	3	4L	86
	7-60	40-50	1.50-1.70	0.01-0.42	0.14-0.16	6.0-8.9	0.0-0.5	.37	.37			
1241: Benin-----	0-7	30-40	1.30-1.50	0.42-1.40	0.19-0.21	6.0-8.9	0.0-0.5	.37	.37	5	4L	86
	7-60	40-50	1.50-1.70	0.01-0.42	0.14-0.16	6.0-8.9	0.0-0.5	.37	.37			
Playas-----	0-6	27-40	1.50-1.70	0.01-0.42	0.02-0.04	6.0-8.9	0.0-0.1	.37	.37	-	4L	86
	6-60	35-70	1.60-1.80	0.01-0.42	0.02-0.04	6.0-8.9	0.0-0.1	.37	.37			
Benin-----	0-7	15-25	1.30-1.50	4.00-14.00	0.17-0.19	0.0-2.9	0.0-0.5	.49	.49	3	4L	86
	7-60	40-50	1.50-1.70	0.01-0.42	0.14-0.16	6.0-8.9	0.0-0.5	.37	.37			
1250: Tecomar-----	0-2	18-27	1.30-1.45	4.00-14.00	0.03-0.06	0.0-2.9	1.0-2.0	.17	.43	1	8	0
	2-14	20-27	1.30-1.45	4.00-14.00	0.04-0.09	0.0-2.9	0.0-0.8	.10	.64			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
Pookaloo-----	0-2	10-18	1.20-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.20	.43	1	6	48
	2-14	10-18	1.35-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.0-0.5	.20	.55			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
1270: Katelana-----	0-5	14-24	1.30-1.45	4.00-14.00	0.19-0.21	3.0-5.9	1.0-2.0	.37	.37	5	4L	86
	5-28	18-25	1.40-1.55	4.00-14.00	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	28-32	18-25	1.40-1.55	4.00-14.00	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	32-60	27-40	1.40-1.55	1.40-4.00	0.19-0.21	6.0-8.9	0.0-0.5	.32	.32			
Sheffit-----	0-4	17-27	1.40-1.60	4.00-14.00	0.19-0.21	3.0-5.9	0.5-1.0	.55	.55	5	4L	86
	4-60	35-50	1.40-1.60	0.01-0.42	0.14-0.17	6.0-8.9	0.0-0.5	.28	.28			
1271: Uvada-----	0-5	27-40	1.35-1.55	1.40-4.00	0.19-0.21	6.0-8.9	0.5-1.0	.55	.55	2	4L	86
	5-8	35-60	1.25-1.45	0.01-0.42	0.15-0.16	6.0-8.9	0.5-1.0	.37	.37			
	8-17	35-60	1.30-1.50	0.01-0.42	0.15-0.16	6.0-8.9	0.5-1.0	.37	.37			
	17-52	35-50	1.35-1.55	0.01-0.42	0.16-0.20	6.0-8.9	0.0-0.5	.37	.37			
	52-60	35-50	1.35-1.55	0.01-0.42	0.16-0.20	6.0-8.9	0.0-0.5	.37	.37			
Ragtown-----	0-16	27-35	1.40-1.60	1.40-4.00	0.15-0.17	3.0-5.9	0.0-0.5	.37	.37	5	4L	86
	16-60	35-60	1.35-1.55	0.42-1.40	0.14-0.16	6.0-8.9	0.0-0.5	.32	.32			
1272: Katelana-----	0-5	14-24	1.30-1.45	4.00-14.00	0.19-0.21	3.0-5.9	1.0-2.0	.37	.37	5	4L	86
	5-28	18-25	1.40-1.55	4.00-14.00	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	28-32	18-25	1.40-1.55	4.00-14.00	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	32-60	27-40	1.40-1.55	1.40-4.00	0.19-0.21	6.0-8.9	0.0-0.5	.32	.32			
Kawich-----	0-2	0-5	1.50-1.65	141.0-705.0	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15	5	1	250
	2-60	0-5	1.50-1.65	141.0-705.0	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
1280: Sycomat-----	0-4	10-18	1.35-1.55	4.00-14.00	0.17-0.20	0.0-2.9	0.0-0.5	.43	.43	5	4L	86
	4-15	5-18	1.45-1.65	14.00-42.00	0.11-0.13	0.0-2.9	0.0-0.5	.24	.24			
	15-44	5-18	1.45-1.65	4.00-14.00	0.11-0.13	0.0-2.9	0.0-0.5	.24	.24			
	44-60	2-5	1.50-1.70	14.00-42.00	0.08-0.10	0.0-2.9	0.0-0.5	.20	.20			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Kunzler-----	0-16 16-48 48-60	12-20 10-18 10-18	1.15-1.35 1.35-1.60 1.30-1.60	4.00-14.00 1.40-4.00 4.00-14.00	0.14-0.17 0.11-0.13 0.09-0.17	0.0-2.9 0.0-2.9 0.0-2.9	1.0-2.0 0.0-0.5 0.0-0.5	.37 .24 .43	.37 .24 .43	5	4L	86
1281: Sycomat-----	0-4 4-15 15-44 44-60	10-18 5-18 5-18 2-5	1.35-1.55 1.45-1.65 1.45-1.65 1.50-1.70	4.00-14.00 14.00-42.00 4.00-14.00 14.00-42.00	0.17-0.20 0.11-0.13 0.11-0.13 0.08-0.10	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	0.0-0.5 0.0-0.5 0.0-0.5 0.0-0.5	.43 .24 .24 .20	.43 .24 .24 .20	5	4L	86
Mazuma-----	0-15 15-60	10-14 5-15	1.40-1.55 1.45-1.65	4.00-14.00 14.00-42.00	0.19-0.21 0.10-0.14	0.0-2.9 0.0-2.9	0.0-0.5 0.0-0.5	.43 .24	.43 .28	5	4L	86
1290: Heist-----	0-4 4-40 40-60	8-18 8-18 8-18	1.40-1.60 1.45-1.65 1.45-1.65	14.00-42.00 14.00-42.00 14.00-42.00	0.13-0.15 0.11-0.13 0.07-0.09	0.0-2.9 0.0-2.9 0.0-2.9	0.6-1.0 0.6-1.0 0.0-0.6	.32 .24 .24	.37 .32 .32	5	3	86
Blimo-----	0-8 8-21 21-36 36-60	12-18 12-18 12-18 12-18	1.35-1.55 1.40-1.60 1.40-1.60 1.40-1.60	4.00-14.00 14.00-42.00 0.42-1.40 0.42-1.40	0.12-0.16 0.07-0.09 0.07-0.09 0.10-0.14	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	1.0-2.0 0.0-0.5 0.0-0.5 0.0-0.5	.20 .10 .24 .28	.37 .32 .32 .32	5	5	56
1300: Cavehill-----	0-12 12-30 30-34	18-27 18-27 ---	1.05-1.20 1.10-1.30 ---	4.00-14.00 4.00-14.00 0.00-0.01	0.08-0.12 0.08-0.11 ---	0.0-2.9 0.0-2.9 ---	4.0-6.0 1.0-2.0 ---	.17 .17 ---	.64 .43 ---	2	6	48
Haunchee-----	0-4 4-11 11-15	10-20 10-20 ---	1.05-1.25 1.05-1.25 ---	4.00-14.00 4.00-14.00 0.00-0.01	0.09-0.11 0.09-0.11 ---	0.0-2.9 0.0-2.9 ---	3.0-5.0 1.0-2.0 ---	.15 .15 ---	.49 .55 ---	1	6	48
Hardzem-----	0-5 5-28 28-55	10-20 20-30 ---	1.40-1.60 1.40-1.60 ---	4.00-14.00 0.42-1.40 0.01-0.42	0.10-0.15 0.05-0.11 ---	0.0-2.9 0.0-2.9 ---	1.0-2.0 1.0-2.0 ---	.20 .05 ---	.37 .43 ---	3	6	48
1360: Toba-----	0-4 4-14 14-23 23-60	20-27 27-35 2-6 0-4	1.30-1.50 1.35-1.55 1.55-1.70 1.60-1.75	4.00-14.00 1.40-4.00 42.00-141.0 141.0-705.0	0.16-0.18 0.19-0.21 0.08-0.10 0.05-0.07	3.0-5.9 3.0-5.9 0.0-2.9 0.0-2.9	2.0-4.0 0.5-1.0 0.0-0.5 0.0-0.5	.37 .28 .20 .15	.37 .28 .20 .15	5	4L	86
Applan-----	0-3 3-19 19-27 27-60	15-20 27-35 2-5 0-5	1.30-1.50 1.45-1.65 1.45-1.65 1.55-1.70	4.00-14.00 1.40-4.00 14.00-42.00 42.00-141.0	0.14-0.18 0.17-0.20 0.05-0.09 0.04-0.06	0.0-2.9 3.0-5.9 0.0-2.9 0.0-2.9	0.0-0.5 0.0-0.5 0.0-0.5 0.0-0.5	.37 .32 .17 .10	.37 .32 .24 .15	3	4L	86
1370: Orupa-----	0-6 6-60	35-40 35-45	1.30-1.45 1.25-1.45	4.00-14.00 4.00-14.00	0.19-0.21 0.14-0.16	6.0-8.9 6.0-8.9	2.0-3.0 0.0-0.5	.43 .43	.43 .43	5	4L	86
Playas-----	0-6 6-60	27-40 35-70	1.50-1.70 1.60-1.80	0.01-0.42 0.01-0.42	0.02-0.04 0.02-0.04	6.0-8.9 6.0-8.9	0.0-0.1 0.0-0.1	.37 .37	.37 .37	-	4L	86
Boofuss-----	0-10 10-27 27-60	40-50 35-50 8-15	1.30-1.50 1.35-1.55 1.45-1.65	0.42-1.40 0.42-1.40 14.00-42.00	0.15-0.17 0.16-0.18 0.14-0.17	6.0-8.9 6.0-8.9 0.0-2.9	0.5-1.0 0.0-0.5 0.0-0.5	.32 .37 .32	.32 .37 .32	5	4	86
1380: Hulderman-----	0-5 5-18 18-27 27-60	12-18 20-25 4-8 0-4	1.35-1.50 1.30-1.50 1.50-1.70 1.60-1.75	14.00-42.00 4.00-14.00 42.00-141.0 141.0-705.0	0.13-0.15 0.16-0.18 0.09-0.10 0.04-0.07	0.0-2.9 3.0-5.9 0.0-2.9 0.0-2.9	2.0-4.0 3.0-6.0 0.5-1.0 0.0-0.5	.49 .37 .20 .15	.49 .37 .20 .20	2	3	86
Toba-----	0-4 4-14 14-23 23-60	20-27 27-35 2-6 0-4	1.30-1.50 1.35-1.55 1.55-1.70 1.60-1.75	4.00-14.00 1.40-4.00 42.00-141.0 141.0-705.0	0.16-0.18 0.19-0.21 0.08-0.10 0.05-0.07	3.0-5.9 3.0-5.9 0.0-2.9 0.0-2.9	2.0-4.0 0.5-1.0 0.0-0.5 0.0-0.5	.37 .28 .20 .15	.37 .28 .20 .15	5	4L	86

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Benin-----	0-7	30-40	1.30-1.50	0.42-1.40	0.19-0.21	6.0-8.9	0.0-0.5	.37	.37	5	4L	86
	7-60	40-50	1.50-1.70	0.01-0.42	0.14-0.16	6.0-8.9	0.0-0.5	.37	.37			
1390: Wendane-----	0-8	15-25	1.35-1.50	4.00-14.00	0.15-0.21	0.0-2.9	1.0-2.0	.55	.55	5	4L	86
	8-42	15-25	1.30-1.50	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43			
	42-60	27-35	1.30-1.50	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
Mysol-----	0-5	27-35	1.35-1.55	0.42-1.40	0.19-0.21	3.0-5.9	0.5-1.0	.55	.55	4	4L	86
	5-17	20-35	1.40-1.60	0.42-1.40	0.19-0.21	3.0-5.9	0.0-0.5	.55	.55			
	17-31	20-35	1.40-1.60	0.42-1.40	0.19-0.21	3.0-5.9	0.0-0.5	.55	.55			
	31-60	2-8	1.55-1.75	14.00-42.00	0.05-0.09	0.0-2.9	0.0-0.5	.15	.24			
Toba-----	0-4	20-27	1.30-1.50	4.00-14.00	0.16-0.18	3.0-5.9	2.0-4.0	.37	.37	5	4L	86
	4-14	27-35	1.35-1.55	1.40-4.00	0.19-0.21	3.0-5.9	0.5-1.0	.28	.28			
	14-23	2-6	1.55-1.70	42.00-141.0	0.08-0.10	0.0-2.9	0.0-0.5	.20	.20			
	23-60	0-4	1.60-1.75	141.0-705.0	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
1410: Threesee-----	0-3	10-20	1.40-1.60	4.00-14.00	0.13-0.14	0.0-2.9	1.0-2.0	.24	.43	2	5	56
	3-14	10-20	1.45-1.65	4.00-14.00	0.13-0.14	0.0-2.9	0.5-1.0	.20	.37			
	14-46	4-10	1.55-1.75	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.24			
	46-60	2-8	1.55-1.75	141.0-705.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.10			
Tosser-----	0-5	5-15	1.30-1.40	14.00-42.00	0.04-0.08	0.0-2.9	1.0-2.0	.10	.24	2	4L	86
	5-16	2-8	1.30-1.50	42.00-141.0	0.03-0.06	0.0-2.9	0.0-1.0	.05	.15			
	16-26	2-8	1.50-1.80	42.00-141.0	0.02-0.04	0.0-2.9	0.0-1.0	.02	.15			
	26-60	2-8	1.50-1.80	14.00-42.00	0.04-0.07	0.0-2.9	0.0-1.0	.10	.15			
1411: Threesee-----	0-3	10-18	1.40-1.60	14.00-42.00	0.04-0.08	0.0-2.9	1.0-2.0	.10	.32	2	5	56
	3-14	10-20	1.45-1.65	4.00-14.00	0.13-0.15	0.0-2.9	0.5-1.0	.24	.37			
	14-46	4-10	1.55-1.75	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.24			
	46-60	2-8	1.55-1.75	141.0-705.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.10			
Linoyer-----	0-9	12-18	1.35-1.55	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.17	.32	5	4	86
	9-60	12-18	1.30-1.50	4.00-14.00	0.14-0.20	0.0-2.9	0.5-1.0	.49	.49			
Okan-----	0-8	8-18	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	1.0-2.0	.20	.24	5	3	86
	8-38	8-18	1.45-1.60	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.20	.24			
	38-60	4-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
1412: Threesee-----	0-3	10-18	1.40-1.60	14.00-42.00	0.04-0.08	0.0-2.9	1.0-2.0	.10	.32	2	5	56
	3-14	10-20	1.45-1.65	4.00-14.00	0.13-0.15	0.0-2.9	0.5-1.0	.24	.37			
	14-46	4-10	1.55-1.75	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.24			
	46-60	2-8	1.55-1.75	141.0-705.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.10			
Idway-----	0-4	4-10	1.50-1.70	42.00-141.0	0.08-0.09	0.0-2.9	0.5-1.0	.15	.17	5	2	134
	4-12	8-18	1.50-1.70	14.00-42.00	0.10-0.12	0.0-2.9	0.0-0.5	.24	.32			
	12-27	8-18	1.55-1.70	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.43	.43			
	27-60	2-8	1.60-1.75	42.00-141.0	0.04-0.05	0.0-2.9	0.0-0.5	.05	.15			
1413: Idway-----	0-4	8-18	1.50-1.70	14.00-42.00	0.10-0.12	0.0-2.9	0.5-1.0	.24	.32	5	3	86
	4-12	8-18	1.50-1.70	14.00-42.00	0.10-0.12	0.0-2.9	0.0-0.5	.24	.32			
	12-27	8-18	1.55-1.70	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.43	.43			
	27-60	2-8	1.60-1.75	42.00-141.0	0.04-0.05	0.0-2.9	0.0-0.5	.05	.15			
Zoravista-----	0-6	0-5	1.45-1.60	42.00-141.0	0.08-0.10	0.0-2.9	0.5-1.0	.20	.20	5	2	134
	6-60	0-5	1.50-1.65	141.0-705.0	0.05-0.07	0.0-2.9	0.0-0.5	.17	.17			
Kunzler-----	0-16	12-20	1.15-1.35	4.00-14.00	0.14-0.17	0.0-2.9	1.0-2.0	.37	.37	5	4L	86
	16-48	10-18	1.35-1.60	1.40-4.00	0.11-0.13	0.0-2.9	0.0-0.5	.24	.24			
	48-60	10-18	1.30-1.60	4.00-14.00	0.09-0.17	0.0-2.9	0.0-0.5	.43	.43			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
1414: Threesee-----	0-3	10-18	1.40-1.60	14.00-42.00	0.04-0.08	0.0-2.9	1.0-2.0	.10	.32	2	5	56
	3-14	10-20	1.45-1.65	4.00-14.00	0.13-0.15	0.0-2.9	0.5-1.0	.24	.37			
	14-46	4-10	1.55-1.75	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.24			
	46-60	2-8	1.55-1.75	141.0-705.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.10			
Shantown-----	0-2	2-8	1.45-1.65	42.00-141.0	0.06-0.08	0.0-2.9	1.0-3.0	.10	.24	4	3	86
	2-11	2-8	1.45-1.60	42.00-141.0	0.06-0.10	0.0-2.9	1.0-3.0	.17	.28			
	11-33	8-12	1.50-1.70	42.00-141.0	0.06-0.08	0.0-2.9	0.5-1.0	.15	.28			
	33-49	2-8	1.55-1.75	42.00-141.0	0.06-0.08	0.0-2.9	0.0-0.5	.10	.20			
	49-60	2-6	1.60-1.75	141.0-705.0	0.02-0.03	0.0-2.9	0.0-0.5	.02	.10			
Kunzler-----	0-16	12-20	1.15-1.35	4.00-14.00	0.14-0.17	0.0-2.9	1.0-2.0	.37	.37	5	4L	86
	16-48	10-18	1.35-1.60	1.40-4.00	0.11-0.13	0.0-2.9	0.0-0.5	.24	.24			
	48-60	10-18	1.30-1.60	4.00-14.00	0.09-0.17	0.0-2.9	0.0-0.5	.43	.43			
1430: Pookaleo-----	0-2	10-18	1.20-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.20	.43	1	6	48
	2-14	10-18	1.35-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.0-0.5	.20	.55			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
Tecomar-----	0-2	18-27	1.30-1.45	4.00-14.00	0.03-0.06	0.0-2.9	1.0-2.0	.17	.43	1	8	0
	2-14	20-27	1.30-1.45	4.00-14.00	0.04-0.09	0.0-2.9	0.0-0.8	.10	.64			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
Rock Outcrop---	---	---	---	---	---	---	---	---	---	-	---	---
1440: Boofuss-----	0-10	40-50	1.30-1.50	0.42-1.40	0.15-0.17	6.0-8.9	0.5-1.0	.32	.32	5	4	86
	10-27	35-50	1.35-1.55	0.42-1.40	0.16-0.18	6.0-8.9	0.0-0.5	.37	.37			
	27-60	8-15	1.45-1.65	14.00-42.00	0.14-0.17	0.0-2.9	0.0-0.5	.32	.32			
Boofuss-----	0-10	40-50	1.30-1.50	0.42-1.40	0.15-0.17	6.0-8.9	0.5-1.0	.32	.32	5	4	86
	10-27	35-50	1.35-1.55	0.42-1.40	0.16-0.18	6.0-8.9	0.0-0.5	.37	.37			
	27-60	8-15	1.45-1.65	14.00-42.00	0.14-0.17	0.0-2.9	0.0-0.5	.32	.32			
Equis-----	0-6	40-50	1.25-1.45	0.01-0.42	0.09-0.11	6.0-8.9	1.0-2.0	.28	.28	5	4	86
	6-24	40-50	1.25-1.45	0.01-0.42	0.14-0.17	6.0-8.9	0.5-1.0	.28	.28			
	24-41	30-45	1.35-1.55	0.01-0.42	0.14-0.17	6.0-8.9	0.0-0.5	.24	.24			
	41-60	20-45	1.45-1.65	0.42-1.40	0.15-0.21	6.0-8.9	0.0-0.5	.32	.32			
1441: Boofuss-----	0-10	40-50	1.30-1.50	0.42-1.40	0.15-0.17	6.0-8.9	0.5-1.0	.32	.32	5	4	86
	10-27	35-50	1.35-1.55	0.42-1.40	0.16-0.18	6.0-8.9	0.0-0.5	.37	.37			
	27-60	8-15	1.45-1.65	14.00-42.00	0.14-0.17	0.0-2.9	0.0-0.5	.32	.32			
Wendane-----	0-8	15-25	1.35-1.50	4.00-14.00	0.15-0.21	0.0-2.9	1.0-2.0	.55	.55	5	4L	86
	8-42	15-25	1.30-1.50	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43			
	42-60	27-35	1.30-1.50	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
Umberland-----	0-15	40-45	1.20-1.35	1.40-4.00	0.15-0.21	6.0-8.9	0.5-1.0	.37	.37	5	4	86
	15-60	35-50	1.30-1.45	0.01-0.42	0.15-0.21	6.0-8.9	0.5-1.0	.32	.32			
1450: Piltedown-----	0-10	10-18	1.50-1.70	4.00-14.00	0.13-0.15	0.0-2.9	0.0-1.0	.28	.28	5	3	86
	10-60	10-18	1.50-1.70	4.00-14.00	0.13-0.15	0.0-2.9	0.0-0.1	.28	.32			
Kawich-----	0-2	0-5	1.50-1.65	141.0-705.0	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15	5	1	250
	2-60	0-5	1.50-1.65	141.0-705.0	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
1460: Tosser-----	0-10	5-15	1.30-1.40	14.00-42.00	0.04-0.08	0.0-2.9	1.0-2.0	.10	.24	2	4L	86
	10-16	2-8	1.30-1.50	42.00-141.0	0.03-0.06	0.0-2.9	0.0-1.0	.05	.15			
	16-26	2-8	1.50-1.80	42.00-141.0	0.02-0.04	0.0-2.9	0.0-1.0	.02	.15			
	26-60	2-8	1.50-1.80	14.00-42.00	0.04-0.07	0.0-2.9	0.0-1.0	.10	.15			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Threesee-----	0-3	10-20	1.40-1.60	4.00-14.00	0.13-0.14	0.0-2.9	1.0-2.0	.24	.43	2	5	56
	3-14	10-20	1.45-1.65	4.00-14.00	0.13-0.14	0.0-2.9	0.5-1.0	.20	.37			
	14-46	4-10	1.55-1.75	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.24			
	46-60	2-8	1.55-1.75	141.0-705.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.10			
1471: Timpie-----	0-8	18-27	1.15-1.30	1.40-4.00	0.16-0.18	0.0-2.9	0.5-1.0	.43	.43	5	4L	86
	8-19	18-27	1.15-1.30	1.40-4.00	0.15-0.17	0.0-2.9	0.0-0.5	.49	.55			
	19-60	18-27	1.15-1.30	1.40-4.00	0.04-0.10	0.0-2.9	0.0-0.5	.55	.55			
Kunzler-----	0-5	12-20	1.15-1.35	4.00-14.00	0.14-0.17	0.0-2.9	1.0-2.0	.37	.37	5	4L	86
	5-48	10-18	1.35-1.60	1.40-4.00	0.11-0.13	0.0-2.9	0.0-0.5	.24	.24			
	48-60	10-18	1.30-1.60	4.00-14.00	0.09-0.17	0.0-2.9	0.0-0.5	.43	.43			
Threesee-----	0-3	10-18	1.40-1.60	14.00-42.00	0.04-0.08	0.0-2.9	1.0-2.0	.10	.32	2	5	56
	3-14	10-20	1.45-1.65	4.00-14.00	0.13-0.15	0.0-2.9	0.5-1.0	.24	.37			
	14-46	4-10	1.55-1.75	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.24			
	46-60	2-8	1.55-1.75	141.0-705.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.10			
1480: Tulase-----	0-2	8-18	1.25-1.40	4.00-14.00	0.19-0.21	0.0-2.9	1.0-2.0	.55	.55	5	4L	86
	2-60	8-18	1.30-1.50	4.00-14.00	0.15-0.21	0.0-2.9	0.5-2.0	.55	.55			
Lincyer-----	0-9	12-18	1.30-1.50	4.00-14.00	0.16-0.18	0.0-2.9	0.5-1.0	.49	.49	5	4L	86
	9-60	12-18	1.30-1.50	4.00-14.00	0.15-0.18	0.0-2.9	0.5-1.0	.49	.49			
1500: Tooele-----	0-5	5-18	1.45-1.65	14.00-42.00	0.11-0.13	0.0-2.9	0.5-1.0	.28	.32	5	3	86
	5-44	5-18	1.50-1.65	14.00-42.00	0.11-0.15	0.0-2.9	0.0-0.5	.28	.32			
	44-61	8-18	1.45-1.65	14.00-42.00	0.12-0.18	0.0-2.9	0.0-0.5	.32	.37			
Loray-----	0-12	10-15	1.55-1.65	14.00-42.00	0.07-0.09	0.0-2.9	0.5-1.0	.15	.28	2	4	86
	12-60	0-8	1.50-1.65	141.0-705.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
1510: Izamatch-----	0-3	8-18	1.50-1.70	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.5	.15	.28	2	4	86
	3-13	8-18	1.50-1.70	14.00-42.00	0.04-0.09	0.0-2.9	0.0-0.5	.10	.24			
	13-22	0-8	1.55-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.20			
	22-60	0-8	1.60-1.75	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
Cliffdown-----	0-6	10-18	1.40-1.55	14.00-42.00	0.06-0.07	0.0-2.9	0.5-1.0	.10	.32	5	5	56
	6-60	8-18	1.40-1.60	14.00-42.00	0.03-0.06	0.0-2.9	0.5-1.0	.10	.32			
1520: Izamatch-----	0-3	8-18	1.50-1.70	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.5	.15	.28	2	4	86
	3-13	8-18	1.50-1.70	14.00-42.00	0.04-0.09	0.0-2.9	0.0-0.5	.10	.24			
	13-22	0-8	1.55-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.20			
	22-60	0-8	1.60-1.75	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
Izamatch-----	0-3	8-18	1.50-1.70	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.5	.15	.28	2	4	86
	3-13	8-18	1.50-1.70	14.00-42.00	0.04-0.09	0.0-2.9	0.0-0.5	.10	.24			
	13-22	0-8	1.55-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.20			
	22-60	0-8	1.60-1.75	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
Luning-----	0-3	3-10	1.50-1.65	42.00-141.0	0.06-0.08	0.0-2.9	0.0-0.5	.24	.24	5	2	134
	3-60	3-10	1.50-1.65	42.00-141.0	0.04-0.06	0.0-2.9	0.0-0.5	.15	.24			
1521: Izamatch-----	0-3	8-18	1.50-1.70	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.5	.15	.28	2	4	86
	3-13	8-18	1.50-1.70	14.00-42.00	0.04-0.09	0.0-2.9	0.0-0.5	.10	.24			
	13-22	0-8	1.55-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.20			
	22-60	0-8	1.60-1.75	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
Izamatch-----	0-3	8-18	1.50-1.70	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.5	.15	.28	2	4	86
	3-13	8-18	1.50-1.70	14.00-42.00	0.04-0.09	0.0-2.9	0.0-0.5	.10	.24			
	13-22	0-8	1.55-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.20			
	22-60	0-8	1.60-1.75	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
Theriot-----	0-7	8-15	1.40-1.60	4.00-14.00	0.09-0.13	0.0-2.9	0.5-1.0	.10	.37	1	8	0
	7-18	5-14	1.45-1.60	4.00-14.00	0.04-0.16	0.0-2.9	0.5-1.0	.17	.37			
	18-22	---	---	0.00-0.01	---	---	---	---	---			
1522:												
Izamatch-----	0-3	8-18	1.50-1.70	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.5	.15	.28	2	4	86
	3-13	8-18	1.50-1.70	14.00-42.00	0.04-0.09	0.0-2.9	0.0-0.5	.10	.24			
	13-22	0-8	1.55-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.20			
	22-60	0-8	1.60-1.75	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
Smaug-----	0-13	8-12	1.35-1.50	14.00-42.00	0.12-0.14	0.0-2.9	0.0-0.5	.28	.32	5	3	86
	13-60	10-18	1.50-1.65	1.40-4.00	0.14-0.16	0.0-2.9	0.0-0.5	.64	.64			
Badland-----	0-6	35-70	1.60-1.80	0.01-0.42	0.05-0.07	6.0-8.9	0.0-0.1	.37	.37	5	5	56
	6-60	35-70	1.60-1.80	0.01-0.42	0.05-0.07	6.0-8.9	0.0-0.1	.37	.37			
1530:												
Theriot-----	0-7	8-15	1.40-1.60	4.00-14.00	0.09-0.13	0.0-2.9	0.5-1.0	.10	.37	1	8	0
	7-18	5-14	1.45-1.60	4.00-14.00	0.04-0.16	0.0-2.9	0.5-1.0	.17	.37			
	18-22	---	---	0.00-0.01	---	---	---	---	---			
Theriot-----	0-7	8-15	1.40-1.60	4.00-14.00	0.10-0.13	0.0-2.9	0.5-1.0	.20	.43	1	5	56
	7-18	5-14	1.45-1.60	4.00-14.00	0.04-0.16	0.0-2.9	0.5-1.0	.17	.37			
	18-22	---	---	0.00-0.01	---	---	---	---	---			
Izamatch-----	0-3	8-18	1.50-1.70	14.00-42.00	0.04-0.08	0.0-2.9	0.0-0.5	.10	.37	2	5	56
	3-13	8-18	1.50-1.70	14.00-42.00	0.04-0.09	0.0-2.9	0.0-0.5	.10	.24			
	13-22	0-8	1.55-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.20			
	22-60	0-8	1.60-1.75	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
1531:												
Theriot-----	0-7	8-15	1.40-1.60	4.00-14.00	0.09-0.13	0.0-2.9	0.5-1.0	.10	.37	1	8	0
	7-18	5-14	1.45-1.60	4.00-14.00	0.04-0.16	0.0-2.9	0.5-1.0	.17	.37			
	18-22	---	---	0.00-0.01	---	---	---	---	---			
Izamatch-----	0-3	8-16	1.45-1.65	14.00-42.00	0.05-0.09	0.0-2.9	0.0-0.5	.10	.32	2	5	56
	3-13	8-18	1.45-1.65	14.00-42.00	0.04-0.09	0.0-2.9	0.0-0.5	.10	.32			
	13-22	0-8	1.45-1.65	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.15			
	22-60	0-8	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.15			
Rock Outcrop----	---	---	---	---	---	---	---	---	---	-	---	---
1532:												
Theriot-----	0-3	10-15	1.50-1.70	4.00-14.00	0.09-0.11	0.0-2.9	0.5-1.0	.28	.37	1	4	86
	3-15	5-14	1.55-1.70	4.00-14.00	0.04-0.06	0.0-2.9	0.5-1.0	.17	.37			
	15-19	---	---	0.00-0.01	---	---	---	---	---			
Theriot-----	0-7	8-15	1.40-1.60	4.00-14.00	0.09-0.13	0.0-2.9	0.5-1.0	.10	.37	1	8	0
	7-18	5-14	1.45-1.60	4.00-14.00	0.04-0.16	0.0-2.9	0.5-1.0	.17	.37			
	18-22	---	---	0.00-0.01	---	---	---	---	---			
Rock Outcrop----	---	---	---	---	---	---	---	---	---	-	---	---
1540:												
Kyler-----	0-3	7-18	1.45-1.60	4.00-14.00	0.08-0.11	0.0-2.9	0.5-1.0	.15	.43	1	6	48
	3-7	7-18	1.45-1.65	4.00-14.00	0.08-0.11	0.0-2.9	0.5-1.0	.15	.43			
	7-11	---	---	0.00-0.01	---	---	---	---	---			
Amtoft-----	0-2	15-25	1.35-1.55	4.00-14.00	0.07-0.11	0.0-2.9	1.0-2.0	.15	.37	1	6	48
	2-12	12-27	1.40-1.60	4.00-14.00	0.06-0.11	0.0-2.9	0.5-1.0	.10	.37			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
Amtoft-----	0-4	15-25	1.30-1.50	4.00-14.00	0.13-0.17	0.0-2.9	1.0-2.0	.24	.43	1	5	56
	4-15	12-27	1.40-1.60	4.00-14.00	0.06-0.11	0.0-2.9	0.5-1.0	.10	.37			
	15-25	---	---	0.00-0.01	---	---	---	---	---			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
1541: Kyler-----	0-3	7-18	1.45-1.60	4.00-14.00	0.08-0.11	0.0-2.9	0.5-1.0	.15	.43	1	6	48
	3-7	7-18	1.45-1.65	4.00-14.00	0.08-0.11	0.0-2.9	0.5-1.0	.15	.43			
	7-11	---	---	0.00-0.01	---	---	---	---	---			
Kyler-----	0-3	7-18	1.45-1.60	4.00-14.00	0.08-0.11	0.0-2.9	0.5-1.0	.15	.43	1	6	48
	3-7	7-18	1.45-1.65	4.00-14.00	0.08-0.11	0.0-2.9	0.5-1.0	.15	.43			
	7-11	---	---	0.00-0.01	---	---	---	---	---			
Rock Outcrop---	---	---	---	---	---	---	---	---	---	-	---	---
1542: Kyler-----	0-3	7-18	1.45-1.60	4.00-14.00	0.08-0.11	0.0-2.9	0.5-1.0	.15	.43	1	6	48
	3-7	7-18	1.45-1.65	4.00-14.00	0.08-0.11	0.0-2.9	0.5-1.0	.15	.43			
	7-11	---	---	0.00-0.01	---	---	---	---	---			
Antoft-----	0-2	15-25	1.35-1.55	4.00-14.00	0.07-0.11	0.0-2.9	1.0-2.0	.15	.37	1	6	48
	2-12	12-27	1.40-1.60	4.00-14.00	0.06-0.11	0.0-2.9	0.5-1.0	.10	.37			
	12-16	---	---	0.00-0.01	---	---	---	---	---			
Jericho-----	0-4	15-20	1.40-1.60	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.17	.37	1	6	48
	4-14	10-18	1.50-1.70	14.00-42.00	0.06-0.08	0.0-2.9	0.5-1.0	.05	.24			
	14-28	---	---	0.00-0.01	---	---	---	---	---			
	28-60	2-4	1.55-1.75	141.0-705.0	0.02-0.03	0.0-2.9	0.0-0.5	.02	.15			
1550: Jericho-----	0-4	15-20	1.40-1.60	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.17	.37	1	6	48
	4-14	10-18	1.50-1.70	14.00-42.00	0.06-0.08	0.0-2.9	0.5-1.0	.05	.24			
	14-28	---	---	0.00-0.01	---	---	---	---	---			
	28-60	2-4	1.55-1.75	141.0-705.0	0.02-0.03	0.0-2.9	0.0-0.5	.02	.15			
Jericho-----	0-4	15-20	1.40-1.60	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.17	.37	1	6	48
	4-14	10-18	1.50-1.70	14.00-42.00	0.06-0.08	0.0-2.9	0.5-1.0	.05	.24			
	14-28	---	---	0.00-0.01	---	---	---	---	---			
	28-60	2-4	1.55-1.75	141.0-705.0	0.02-0.03	0.0-2.9	0.0-0.5	.02	.15			
1560: Toano-----	0-9	8-15	1.35-1.55	4.00-14.00	0.14-0.16	0.0-2.9	0.5-1.0	.55	.55	5	3	86
	9-27	8-15	1.40-1.60	4.00-14.00	0.14-0.16	0.0-2.9	0.0-0.5	.55	.55			
	27-60	8-15	1.40-1.60	4.00-14.00	0.14-0.16	0.0-2.9	0.0-0.5	.55	.55			
Timpie-----	0-8	5-20	1.15-1.30	1.40-4.00	0.15-0.17	0.0-2.9	0.5-1.0	.43	.49	5	3	86
	8-19	18-27	1.15-1.30	1.40-4.00	0.15-0.17	0.0-2.9	0.0-0.5	.49	.55			
	19-60	18-27	1.15-1.30	1.40-4.00	0.04-0.10	0.0-2.9	0.0-0.5	.55	.55			
1570: Jericho-----	0-4	15-20	1.40-1.60	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.17	.37	1	6	48
	4-14	10-18	1.50-1.70	14.00-42.00	0.06-0.08	0.0-2.9	0.5-1.0	.05	.24			
	14-28	---	---	0.00-0.01	---	---	---	---	---			
	28-60	2-4	1.55-1.75	141.0-705.0	0.02-0.03	0.0-2.9	0.0-0.5	.02	.15			
Xeric Torriorthents--	0-5	8-15	1.60-1.75	14.00-42.00	0.08-0.10	0.0-2.9	0.5-1.0	.15	.28	5	4	86
	5-60	2-8	1.65-1.80	141.0-705.0	0.01-0.03	0.0-2.9	0.0-0.5	.05	.20			
1580: Armespan-----	0-7	10-18	1.40-1.55	14.00-42.00	0.05-0.08	0.0-2.9	0.8-2.0	.10	.32	3	5	56
	7-21	12-18	1.35-1.50	4.00-14.00	0.09-0.12	0.0-2.9	0.0-0.5	.24	.37			
	21-32	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.24			
	32-60	5-10	1.45-1.60	42.00-141.0	0.02-0.05	0.0-2.9	0.0-0.5	.05	.17			
Jericho-----	0-4	15-20	1.40-1.60	4.00-14.00	0.09-0.11	0.0-2.9	1.0-2.0	.17	.37	1	6	48
	4-14	10-18	1.50-1.70	14.00-42.00	0.06-0.08	0.0-2.9	0.5-1.0	.05	.24			
	14-28	---	---	0.00-0.01	---	---	---	---	---			
	28-60	2-4	1.55-1.75	141.0-705.0	0.02-0.03	0.0-2.9	0.0-0.5	.02	.15			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
1581: Armespan-----	0-7	10-18	1.40-1.55	14.00-42.00	0.05-0.08	0.0-2.9	0.8-2.0	.10	.32	3	5	56
	7-21	12-18	1.35-1.50	4.00-14.00	0.09-0.12	0.0-2.9	0.0-0.5	.24	.37			
	21-32	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.24			
	32-60	5-10	1.45-1.60	42.00-141.0	0.02-0.05	0.0-2.9	0.0-0.5	.05	.17			
Kyler-----	0-3	7-18	1.45-1.60	4.00-14.00	0.08-0.11	0.0-2.9	0.5-1.0	.15	.43	1	6	48
	3-7	7-18	1.45-1.65	4.00-14.00	0.08-0.11	0.0-2.9	0.5-1.0	.15	.43			
	7-11	---	---	0.00-0.01	---	---	---	---	---			
Heist-----	0-4	8-18	1.40-1.60	14.00-42.00	0.13-0.15	0.0-2.9	0.6-1.0	.32	.37	5	3	86
	4-40	8-18	1.45-1.65	14.00-42.00	0.11-0.13	0.0-2.9	0.6-1.0	.24	.32			
	40-60	8-18	1.45-1.65	14.00-42.00	0.07-0.09	0.0-2.9	0.0-0.6	.24	.32			
1582: Armespan-----	0-7	10-18	1.40-1.55	14.00-42.00	0.05-0.08	0.0-2.9	0.8-2.0	.10	.32	3	5	56
	7-21	12-18	1.35-1.50	4.00-14.00	0.09-0.12	0.0-2.9	0.0-0.5	.24	.37			
	21-32	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.24			
	32-60	5-10	1.45-1.60	42.00-141.0	0.02-0.05	0.0-2.9	0.0-0.5	.05	.17			
Xeric Torriorthents--	0-5	8-15	1.60-1.75	14.00-42.00	0.08-0.10	0.0-2.9	0.5-1.0	.15	.28	5	4	86
	5-60	2-8	1.65-1.80	141.0-705.0	0.01-0.03	0.0-2.9	0.0-0.5	.05	.20			
1590: Luning-----	0-3	8-15	1.50-1.65	42.00-141.0	0.04-0.06	0.0-2.9	0.0-0.1	.17	.24	5	4	86
	3-60	3-10	1.50-1.65	42.00-141.0	0.04-0.06	0.0-2.9	0.0-0.1	.15	.24			
Luning-----	0-3	3-10	1.50-1.65	42.00-141.0	0.04-0.06	0.0-2.9	0.0-0.5	.17	.24	5	3	86
	3-60	3-10	1.50-1.65	42.00-141.0	0.04-0.06	0.0-2.9	0.0-0.5	.15	.24			
Loray-----	0-12	10-20	1.35-1.55	4.00-14.00	0.10-0.15	0.0-2.9	0.0-1.0	.10	.43	2	5	56
	12-60	0-8	1.50-1.65	141.0-705.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
1591: Luning-----	0-3	8-15	1.40-1.55	14.00-42.00	0.10-0.12	0.0-2.9	0.0-0.1	.28	.28	5	3	86
	3-60	3-10	1.50-1.65	42.00-141.0	0.04-0.06	0.0-2.9	0.0-0.1	.15	.24			
Izamatch-----	0-3	8-18	1.50-1.70	14.00-42.00	0.04-0.08	0.0-2.9	0.0-0.5	.10	.37	2	5	56
	3-13	8-18	1.50-1.70	14.00-42.00	0.04-0.09	0.0-2.9	0.0-0.5	.10	.24			
	13-22	0-8	1.55-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.20			
	22-60	0-8	1.60-1.75	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.05	.20			
Badland-----	0-6	35-70	1.60-1.80	0.01-0.42	0.05-0.07	6.0-8.9	0.0-0.1	.37	.37	5	5	56
	6-60	35-70	1.60-1.80	0.01-0.42	0.05-0.07	6.0-8.9	0.0-0.1	.37	.37			
1600: Eaglepass-----	0-1	8-18	1.45-1.65	14.00-42.00	0.04-0.08	0.0-2.9	0.0-0.5	.10	.37	1	5	56
	1-5	8-18	1.45-1.65	14.00-42.00	0.03-0.07	0.0-2.9	0.0-0.5	.10	.37			
	5-9	---	---	0.00-0.01	---	---	---	---	---			
Antoft-----	0-4	15-25	1.35-1.55	4.00-14.00	0.07-0.11	0.0-2.9	1.0-2.0	.15	.37	1	6	48
	4-15	12-27	1.40-1.60	4.00-14.00	0.06-0.11	0.0-2.9	0.5-1.0	.10	.37			
	15-25	---	---	0.00-0.01	---	---	---	---	---			
1610: Xeric Torriorthents--	0-5	8-15	1.60-1.75	14.00-42.00	0.08-0.10	0.0-2.9	0.5-1.0	.15	.28	5	4	86
	5-60	2-8	1.65-1.80	141.0-705.0	0.01-0.03	0.0-2.9	0.0-0.5	.05	.20			
Armespan-----	0-7	10-18	1.40-1.55	14.00-42.00	0.05-0.08	0.0-2.9	0.8-2.0	.10	.32	3	5	56
	7-21	12-18	1.35-1.50	4.00-14.00	0.09-0.12	0.0-2.9	0.0-0.5	.24	.37			
	21-32	10-18	1.45-1.65	4.00-14.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.24			
	32-60	5-10	1.45-1.60	42.00-141.0	0.02-0.05	0.0-2.9	0.0-0.5	.05	.17			
Badland-----	0-60	0-0	---	0.01-0.42	0.00-0.00	---	---	---	---	-	8	0

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
1620: Kolda-----	0-10	10-20	0.70-0.90	14.00-42.00	0.20-0.23	0.0-2.9	10-15	.49	.49	5	8	0
	10-15	20-27	1.20-1.40	4.00-14.00	0.19-0.21	3.0-5.9	3.0-6.0	.55	.55			
	15-36	40-50	1.30-1.50	0.42-1.40	0.19-0.21	6.0-8.9	0.0-1.0	.28	.28			
	36-60	40-50	1.60-1.80	0.42-1.40	0.14-0.16	6.0-8.9	0.0-0.1	.28	.28			
Duffer-----	0-25	15-20	1.35-1.50	4.00-14.00	0.19-0.21	0.0-2.9	1.0-3.0	.37	.37	5	4L	86
	25-60	20-35	1.35-1.55	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
Sonoma-----	0-6	27-35	1.35-1.50	1.40-4.00	0.19-0.21	3.0-5.9	1.0-2.0	.43	.43	5	4L	86
	6-48	20-35	1.35-1.55	1.40-4.00	0.19-0.21	3.0-5.9	0.5-1.0	.24	.24			
	48-60	40-50	1.35-1.50	0.42-1.40	0.14-0.17	6.0-8.9	0.5-1.0	.28	.28			
1621: Kolda-----	0-6	10-20	0.70-0.90	14.00-42.00	0.20-0.23	0.0-2.9	10-15	.49	.49	5	4L	86
	6-15	20-27	1.20-1.40	4.00-14.00	0.19-0.21	3.0-5.9	3.0-6.0	.55	.55			
	15-36	40-50	1.30-1.50	0.42-1.40	0.19-0.21	6.0-8.9	0.5-1.0	.28	.28			
	36-60	40-50	1.60-1.80	0.42-1.40	0.14-0.16	6.0-8.9	0.0-0.5	.28	.28			
Rubylake-----	0-7	27-35	1.35-1.55	1.40-4.00	0.18-0.20	3.0-5.9	1.0-2.0	.37	.37	5	4L	86
	7-23	18-27	1.40-1.60	1.40-4.00	0.20-0.23	3.0-5.9	0.5-1.0	.55	.55			
	23-55	18-27	1.35-1.55	1.40-4.00	0.19-0.21	3.0-5.9	1.0-2.0	.55	.55			
	55-60	25-35	1.40-1.55	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
Kolda-----	0-10	10-20	0.70-0.90	14.00-42.00	0.20-0.23	0.0-2.9	10-15	.49	.49	5	8	0
	10-15	20-27	1.20-1.40	4.00-14.00	0.19-0.21	3.0-5.9	3.0-6.0	.55	.55			
	15-36	40-50	1.30-1.50	0.42-1.40	0.19-0.21	6.0-8.9	0.0-1.0	.28	.28			
	36-60	40-50	1.60-1.80	0.42-1.40	0.14-0.16	6.0-8.9	0.0-0.1	.28	.28			
1622: Kolda-----	0-10	10-20	0.70-0.90	14.00-42.00	0.20-0.23	0.0-2.9	10-15	.49	.49	5	8	0
	10-15	20-27	1.20-1.40	4.00-14.00	0.19-0.21	3.0-5.9	3.0-6.0	.55	.55			
	15-36	40-50	1.30-1.50	0.42-1.40	0.19-0.21	6.0-8.9	0.0-1.0	.28	.28			
	36-60	40-50	1.60-1.80	0.42-1.40	0.14-0.16	6.0-8.9	0.0-0.1	.28	.28			
1623: Kolda-----	0-10	10-20	0.70-0.90	14.00-42.00	0.20-0.23	0.0-2.9	10-15	.49	.49	5	8	0
	10-15	20-27	1.20-1.40	4.00-14.00	0.19-0.21	3.0-5.9	3.0-6.0	.55	.55			
	15-36	40-50	1.30-1.50	0.42-1.40	0.19-0.21	6.0-8.9	0.0-1.0	.28	.28			
	36-60	40-50	1.60-1.80	0.42-1.40	0.14-0.16	6.0-8.9	0.0-0.1	.28	.28			
Water-----	---	---	---	---	---	---	---	---	---	-	---	---
1630: Pookaloo-----	0-2	10-18	1.20-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.20	.43	1	6	48
	2-14	10-18	1.35-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.0-0.5	.20	.55			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
Cavehill-----	0-12	18-27	1.05-1.20	4.00-14.00	0.12-0.14	0.0-2.9	4.0-6.0	.15	.43	2	6	48
	12-30	18-27	1.10-1.30	4.00-14.00	0.08-0.11	0.0-2.9	1.0-2.0	.17	.43			
	30-34	---	---	0.00-0.01	---	---	---	---	---			
Rock Outcrop----	---	---	---	---	---	---	---	---	---	-	---	---
1631: Pookaloo-----	0-2	10-18	1.20-1.35	4.00-14.00	0.06-0.09	0.0-2.9	1.0-2.0	.20	.43	1	6	48
	2-14	10-18	1.35-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.0-0.5	.20	.55			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
Tecomar-----	0-2	18-27	1.30-1.45	4.00-14.00	0.03-0.06	0.0-2.9	1.0-2.0	.17	.43	1	8	0
	2-14	20-27	1.30-1.45	4.00-14.00	0.04-0.09	0.0-2.9	0.0-0.8	.10	.64			
	14-18	---	---	0.00-0.01	---	---	---	---	---			
Wardbay-----	0-14	18-27	1.05-1.20	4.00-14.00	0.06-0.12	0.0-2.9	2.0-4.0	.10	.37	3	6	48
	14-55	18-27	1.10-1.30	4.00-14.00	0.03-0.08	0.0-2.9	1.0-2.0	.05	.55			
	55-59	---	---	0.00-0.01	---	---	---	---	---			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
1640: Jungo-----	0-3	16-24	1.30-1.45	4.00-14.00	0.08-0.10	0.0-2.9	1.0-2.0	.15	.49	5	7	38
	3-20	27-35	1.40-1.60	1.40-4.00	0.08-0.10	0.0-2.9	0.0-1.0	.10	.37			
	20-60	27-35	1.40-1.60	1.40-4.00	0.06-0.08	0.0-2.9	0.0-0.1	.05	.37			
Jungo-----	0-3	16-24	1.30-1.45	4.00-14.00	0.08-0.10	0.0-2.9	1.0-2.0	.15	.49	5	7	38
	3-20	27-35	1.40-1.60	1.40-4.00	0.08-0.10	0.0-2.9	0.0-1.0	.10	.37			
	20-60	27-35	1.40-1.60	1.40-4.00	0.06-0.08	0.0-2.9	0.0-0.1	.05	.37			
1650: Shantown-----	0-2	2-8	1.45-1.65	42.00-141.0	0.06-0.08	0.0-2.9	1.0-3.0	.10	.24	4	3	86
	2-11	2-8	1.45-1.60	42.00-141.0	0.06-0.10	0.0-2.9	1.0-3.0	.17	.28			
	11-33	8-12	1.50-1.70	42.00-141.0	0.06-0.08	0.0-2.9	0.5-1.0	.15	.28			
	33-49	2-8	1.55-1.75	42.00-141.0	0.06-0.08	0.0-2.9	0.0-0.5	.10	.20			
	49-60	2-6	1.60-1.75	141.0-705.0	0.02-0.03	0.0-2.9	0.0-0.5	.02	.10			
Zoravista-----	0-6	0-5	1.45-1.60	42.00-141.0	0.08-0.10	0.0-2.9	0.5-1.0	.20	.20	5	2	134
	6-60	0-5	1.50-1.65	141.0-705.0	0.05-0.07	0.0-2.9	0.0-0.5	.17	.17			
1651: Shantown-----	0-2	2-8	1.45-1.65	42.00-141.0	0.06-0.08	0.0-2.9	1.0-3.0	.10	.24	4	3	86
	2-11	2-8	1.45-1.60	42.00-141.0	0.06-0.10	0.0-2.9	1.0-3.0	.17	.28			
	11-33	8-12	1.50-1.70	42.00-141.0	0.06-0.08	0.0-2.9	0.5-1.0	.15	.28			
	33-49	2-8	1.55-1.75	42.00-141.0	0.06-0.08	0.0-2.9	0.0-0.5	.10	.20			
	49-60	2-6	1.60-1.75	141.0-705.0	0.02-0.03	0.0-2.9	0.0-0.5	.02	.10			
Shantown-----	0-2	2-8	1.45-1.65	42.00-141.0	0.06-0.08	0.0-2.9	1.0-3.0	.10	.24	4	3	86
	2-11	2-8	1.45-1.60	42.00-141.0	0.06-0.10	0.0-2.9	1.0-3.0	.17	.28			
	11-33	8-12	1.50-1.70	42.00-141.0	0.06-0.08	0.0-2.9	0.5-1.0	.15	.28			
	33-49	2-8	1.55-1.75	42.00-141.0	0.06-0.08	0.0-2.9	0.0-0.5	.10	.20			
	49-60	2-6	1.60-1.75	141.0-705.0	0.02-0.03	0.0-2.9	0.0-0.5	.02	.10			
1660: Wendane-----	0-8	15-25	1.35-1.50	4.00-14.00	0.15-0.21	0.0-2.9	0.0-0.5	.55	.55	5	4L	86
	8-42	15-25	1.30-1.50	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43			
	42-60	27-35	1.30-1.50	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
Logan-----	0-10	10-20	1.20-1.35	4.00-14.00	0.19-0.21	0.0-2.9	2.0-4.0	.55	.55	5	4L	86
	10-40	25-35	1.20-1.40	1.40-4.00	0.19-0.21	3.0-5.9	0.5-1.0	.43	.43			
	40-60	35-45	1.20-1.40	0.42-1.40	0.15-0.17	6.0-8.9	0.0-0.5	.37	.37			
1670: Wendane-----	0-8	15-25	1.35-1.50	4.00-14.00	0.15-0.21	0.0-2.9	1.0-2.0	.55	.55	5	4L	86
	8-42	15-25	1.30-1.50	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43			
	42-60	27-35	1.30-1.50	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
Logan-----	0-10	10-20	1.20-1.35	4.00-14.00	0.19-0.21	0.0-2.9	2.0-4.0	.55	.55	5	4L	86
	10-40	25-35	1.20-1.40	1.40-4.00	0.19-0.21	3.0-5.9	0.5-1.0	.43	.43			
	40-60	35-45	1.20-1.40	0.42-1.40	0.15-0.17	6.0-8.9	0.0-0.5	.37	.37			
Wendane-----	0-8	15-25	1.35-1.50	4.00-14.00	0.15-0.21	0.0-2.9	0.0-0.5	.55	.55	5	4L	86
	8-42	15-25	1.30-1.50	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43			
	42-60	27-35	1.30-1.50	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
1680: Rubylake-----	0-7	27-35	1.35-1.55	1.40-4.00	0.18-0.20	3.0-5.9	1.0-2.0	.37	.37	5	4L	86
	7-23	18-27	1.40-1.60	1.40-4.00	0.20-0.23	3.0-5.9	0.5-1.0	.55	.55			
	23-55	18-27	1.35-1.55	1.40-4.00	0.19-0.21	3.0-5.9	1.0-2.0	.55	.55			
	55-60	25-35	1.40-1.55	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
Kolda-----	0-6	10-20	0.70-0.90	14.00-42.00	0.20-0.23	0.0-2.9	10-15	.49	.49	5	4L	86
	6-15	20-27	1.20-1.40	4.00-14.00	0.19-0.21	3.0-5.9	3.0-6.0	.55	.55			
	15-36	40-50	1.30-1.50	0.42-1.40	0.19-0.21	6.0-8.9	0.5-1.0	.28	.28			
	36-60	40-50	1.60-1.80	0.42-1.40	0.14-0.16	6.0-8.9	0.0-0.5	.28	.28			
Wendane-----	0-8	15-25	1.35-1.50	4.00-14.00	0.15-0.21	0.0-2.9	1.0-2.0	.55	.55	5	4L	86
	8-42	15-25	1.30-1.50	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43			
	42-60	27-35	1.30-1.50	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
1681: Wendane-----	0-8	15-25	1.35-1.50	4.00-14.00	0.15-0.21	0.0-2.9	1.0-2.0	.55	.55	5	4L	86
	8-42	15-25	1.30-1.50	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43			
	42-60	27-35	1.30-1.50	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
Logan-----	0-10	10-20	1.20-1.35	4.00-14.00	0.19-0.21	0.0-2.9	2.0-4.0	.55	.55	5	4L	86
	10-40	25-35	1.20-1.40	1.40-4.00	0.19-0.21	3.0-5.9	0.5-1.0	.43	.43			
	40-60	35-45	1.20-1.40	0.42-1.40	0.15-0.17	6.0-8.9	0.0-0.5	.37	.37			
Umbertland-----	0-15	18-27	1.30-1.45	4.00-14.00	0.16-0.19	3.0-5.9	0.5-1.0	.43	.43	5	4L	86
	15-60	35-50	1.30-1.45	0.01-0.42	0.15-0.21	6.0-8.9	0.5-1.0	.32	.32			
1690: Krenka-----	0-17	10-15	1.35-1.55	4.00-14.00	0.14-0.16	0.0-2.9	2.0-4.0	.32	.37	3	5	56
	17-31	20-25	1.40-1.60	4.00-14.00	0.08-0.11	0.0-2.9	1.0-3.0	.05	.37			
	31-60	20-25	1.45-1.65	4.00-14.00	0.06-0.10	0.0-2.9	0.5-1.0	.02	.37			
Secrepass-----	0-7	10-18	1.30-1.50	4.00-14.00	0.12-0.14	0.0-2.9	2.0-4.0	.20	.37	3	6	48
	7-14	30-40	1.30-1.50	1.40-4.00	0.10-0.14	0.0-2.9	1.0-2.0	.10	.28			
	14-31	40-60	1.20-1.40	0.01-0.42	0.06-0.10	3.0-5.9	0.5-1.0	.05	.20			
	31-60	10-18	1.50-1.70	14.00-42.00	0.03-0.05	0.0-2.9	0.0-0.5	.02	.17			
1700: Heechee-----	0-7	15-27	1.15-1.25	4.00-14.00	0.12-0.15	0.0-2.9	2.0-4.0	.20	.37	5	6	48
	7-20	25-35	1.30-1.45	1.40-4.00	0.06-0.14	0.0-2.9	1.0-2.0	.10	.49			
	20-60	10-25	1.40-1.60	42.00-141.0	0.02-0.06	0.0-2.9	0.0-1.0	.05	.49			
Rubicity-----	0-3	10-18	1.35-1.50	14.00-42.00	0.08-0.10	0.0-2.9	2.0-4.0	.10	.32	5	4	86
	3-42	10-18	1.45-1.60	14.00-42.00	0.08-0.10	0.0-2.9	2.0-4.0	.10	.32			
	42-60	10-18	1.50-1.70	14.00-42.00	0.08-0.11	0.0-2.9	0.5-1.0	.15	.32			
Heechee-----	0-7	10-20	1.45-1.60	4.00-14.00	0.06-0.10	0.0-2.9	2.0-4.0	.05	.28	5	8	0
	7-30	25-35	1.40-1.60	1.40-4.00	0.06-0.14	0.0-2.9	1.0-2.0	.10	.28			
	30-60	10-25	1.55-1.70	42.00-141.0	0.02-0.06	0.0-2.9	0.0-1.0	.05	.20			
1702: Heechee-----	0-7	15-27	1.15-1.25	4.00-14.00	0.12-0.15	0.0-2.9	2.0-4.0	.20	.37	5	6	48
	7-20	25-35	1.30-1.45	1.40-4.00	0.06-0.14	0.0-2.9	1.0-2.0	.10	.49			
	20-60	10-25	1.40-1.60	42.00-141.0	0.02-0.06	0.0-2.9	0.0-1.0	.05	.49			
McIvey-----	0-12	20-27	1.05-1.20	4.00-14.00	0.08-0.17	0.0-2.9	2.0-5.0	.17	.64	5	7	38
	12-18	30-40	1.25-1.45	1.40-4.00	0.12-0.17	3.0-5.9	1.0-2.0	.10	.43			
	18-60	40-50	1.25-1.40	0.01-0.42	0.07-0.10	3.0-5.9	0.5-1.0	.05	.37			
Rubicity-----	0-3	10-18	1.35-1.50	14.00-42.00	0.08-0.10	0.0-2.9	2.0-4.0	.10	.32	5	4	86
	3-42	10-18	1.45-1.60	14.00-42.00	0.08-0.10	0.0-2.9	2.0-4.0	.10	.32			
	42-60	10-18	1.50-1.70	14.00-42.00	0.08-0.11	0.0-2.9	0.5-1.0	.15	.32			
1710: James Canyon----	0-8	10-15	1.25-1.45	14.00-42.00	0.13-0.15	0.0-2.9	2.0-4.0	.37	.37	5	3	86
	8-33	18-27	1.30-1.50	4.00-14.00	0.12-0.15	3.0-5.9	2.0-4.0	.24	.43			
	33-60	10-15	1.50-1.65	14.00-42.00	0.13-0.15	0.0-2.9	1.0-2.0	.37	.37			
Wendane-----	0-8	15-25	1.35-1.50	4.00-14.00	0.15-0.21	0.0-2.9	1.0-2.0	.55	.55	5	4L	86
	8-42	15-25	1.30-1.50	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43			
	42-60	27-35	1.30-1.50	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
1711: James Canyon----	0-8	10-15	1.25-1.45	14.00-42.00	0.13-0.15	0.0-2.9	2.0-4.0	.37	.37	5	3	86
	8-33	18-27	1.30-1.50	4.00-14.00	0.12-0.15	3.0-5.9	2.0-4.0	.24	.43			
	33-60	10-15	1.50-1.65	14.00-42.00	0.13-0.15	0.0-2.9	1.0-2.0	.37	.37			
Wendane-----	0-8	15-25	1.35-1.50	4.00-14.00	0.15-0.21	0.0-2.9	1.0-2.0	.55	.55	5	4L	86
	8-42	15-25	1.30-1.50	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43			
	42-60	27-35	1.30-1.50	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Wendane-----	0-8	15-25	1.35-1.50	4.00-14.00	0.15-0.21	0.0-2.9	0.0-0.5	.55	.55	5	4L	86
	8-42	15-25	1.30-1.50	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43			
	42-60	27-35	1.30-1.50	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
1720: Welch-----	0-8	15-20	1.30-1.50	4.00-14.00	0.16-0.18	0.0-2.9	2.0-4.0	.32	.32	5	5	56
	8-60	27-35	1.30-1.50	1.40-4.00	0.16-0.21	3.0-5.9	0.5-4.0	.28	.32			
1721: Welch-----	0-8	15-20	1.30-1.50	4.00-14.00	0.16-0.18	0.0-2.9	2.0-4.0	.32	.32	5	5	56
	8-60	27-35	1.30-1.50	1.40-4.00	0.16-0.21	3.0-5.9	0.5-4.0	.28	.32			
Welsum-----	0-11	20-27	1.15-1.35	4.00-14.00	0.19-0.21	3.0-5.9	2.0-4.0	.37	.37	3	4L	86
	11-25	27-35	1.20-1.40	1.40-4.00	0.19-0.21	3.0-5.9	1.0-4.0	.37	.43			
	25-60	0-5	1.40-1.60	141.0-705.0	0.03-0.05	0.0-2.9	0.0-2.0	.02	.20			
1722: Welch-----	0-5	15-20	1.25-1.40	4.00-14.00	0.16-0.18	0.0-2.9	2.0-4.0	.32	.32	4	5	56
	5-41	27-35	1.30-1.45	1.40-4.00	0.16-0.21	3.0-5.9	0.5-3.0	.28	.32			
	41-61	5-14	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.17			
Slipback-----	0-12	12-18	1.40-1.55	14.00-42.00	0.11-0.13	0.0-2.9	1.0-2.0	.28	.32	4	3	86
	12-39	25-35	1.40-1.60	1.40-4.00	0.10-0.13	3.0-5.9	0.5-1.0	.10	.17			
	39-55	12-18	1.50-1.65	14.00-42.00	0.08-0.10	0.0-2.9	0.0-0.5	.15	.24			
	55-60	2-8	1.50-1.70	42.00-141.0	0.02-0.05	0.0-2.9	0.0-0.5	.05	.15			
Welch-----	0-5	15-20	1.25-1.40	4.00-14.00	0.16-0.18	0.0-2.9	2.0-4.0	.32	.32	4	5	56
	5-41	27-35	1.30-1.45	1.40-4.00	0.16-0.21	3.0-5.9	0.5-3.0	.28	.32			
	41-61	5-14	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.17			
1723: Welch-----	0-8	15-20	1.30-1.50	4.00-14.00	0.16-0.18	0.0-2.9	2.0-4.0	.32	.32	5	5	56
	8-60	27-35	1.30-1.50	1.40-4.00	0.16-0.21	3.0-5.9	0.5-4.0	.28	.32			
Welch-----	0-8	15-20	1.25-1.40	4.00-14.00	0.16-0.18	0.0-2.9	2.0-4.0	.32	.32	5	5	56
	8-60	27-35	1.30-1.45	1.40-4.00	0.16-0.21	3.0-5.9	0.5-4.0	.28	.32			
1730: McIvey-----	0-12	20-27	1.05-1.20	4.00-14.00	0.08-0.17	0.0-2.9	2.0-5.0	.17	.64	5	7	38
	12-18	30-40	1.25-1.45	1.40-4.00	0.12-0.17	3.0-5.9	1.0-2.0	.10	.43			
	18-60	40-50	1.25-1.40	0.01-0.42	0.07-0.10	3.0-5.9	0.5-1.0	.05	.37			
Donna-----	0-7	15-25	1.25-1.35	4.00-14.00	0.18-0.20	0.0-2.9	1.0-3.0	.37	.43	2	6	48
	7-33	60-70	1.15-1.35	0.01-0.42	0.14-0.16	6.0-8.9	0.5-2.0	.20	.24			
	33-43	---	---	0.00-0.01	---	---	---	---	---			
	43-60	15-25	1.45-1.65	14.00-42.00	0.04-0.06	0.0-2.9	0.0-0.5	.20	.32			
1731: McIvey-----	0-12	20-27	1.05-1.20	4.00-14.00	0.08-0.17	0.0-2.9	2.0-5.0	.17	.64	5	7	38
	12-18	30-40	1.25-1.45	1.40-4.00	0.12-0.17	3.0-5.9	1.0-2.0	.10	.43			
	18-60	40-50	1.25-1.40	0.01-0.42	0.07-0.10	3.0-5.9	0.5-1.0	.05	.37			
Chen-----	0-3	20-27	1.10-1.25	4.00-14.00	0.08-0.12	0.0-2.9	2.0-3.0	.10	.32	1	7	38
	3-16	40-55	1.25-1.40	0.01-0.42	0.05-0.09	3.0-5.9	0.5-2.0	.10	.49			
	16-20	---	---	0.00-0.01	---	---	---	---	---			
Donna-----	0-7	15-25	1.20-1.35	4.00-14.00	0.19-0.21	3.0-5.9	1.0-3.0	.43	.43	2	5	56
	7-33	60-70	1.15-1.35	0.01-0.42	0.14-0.16	6.0-8.9	0.5-2.0	.20	.24			
	33-43	---	---	0.00-0.01	---	---	---	---	---			
	43-60	15-25	1.45-1.65	14.00-42.00	0.04-0.06	0.0-2.9	0.0-0.5	.20	.32			
1732: McIvey-----	0-12	20-27	1.05-1.20	4.00-14.00	0.12-0.15	3.0-5.9	2.0-5.0	.15	.43	5	7	38
	12-18	30-40	1.25-1.45	1.40-4.00	0.12-0.17	3.0-5.9	0.5-1.0	.10	.43			
	18-60	40-50	1.25-1.40	0.01-0.42	0.07-0.10	3.0-5.9	0.5-1.0	.05	.37			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Stampede-----	0-11	20-25	1.30-1.40	4.00-14.00	0.16-0.19	3.0-5.9	1.0-3.0	.43	.49	2	6	48
	11-35	40-55	1.20-1.35	0.01-0.42	0.14-0.16	6.0-8.9	0.5-1.0	.28	.32			
	35-45	---	---	0.00-0.01	---	---	---	---	---			
Heechee-----	0-7	15-27	1.15-1.25	4.00-14.00	0.12-0.15	0.0-2.9	2.0-4.0	.20	.37	5	6	48
	7-20	25-35	1.30-1.45	1.40-4.00	0.06-0.14	0.0-2.9	1.0-2.0	.10	.49			
	20-60	10-25	1.40-1.60	42.00-141.0	0.02-0.06	0.0-2.9	0.0-1.0	.05	.49			
1740: Slipback-----	0-12	12-18	1.40-1.55	14.00-42.00	0.11-0.13	0.0-2.9	1.0-2.0	.28	.32	4	3	86
	12-39	25-35	1.40-1.60	1.40-4.00	0.10-0.13	3.0-5.9	0.5-1.0	.10	.17			
	39-55	12-18	1.50-1.65	14.00-42.00	0.08-0.10	0.0-2.9	0.0-0.5	.15	.24			
	55-60	2-8	1.50-1.70	42.00-141.0	0.02-0.05	0.0-2.9	0.0-0.5	.05	.15			
Welch-----	0-5	15-20	1.25-1.40	4.00-14.00	0.16-0.18	0.0-2.9	2.0-4.0	.32	.32	4	5	56
	5-41	27-35	1.30-1.45	1.40-4.00	0.16-0.21	3.0-5.9	0.5-3.0	.28	.32			
	41-61	5-14	1.50-1.70	42.00-141.0	0.03-0.05	0.0-2.9	0.0-0.5	.10	.17			
1741: Slipback-----	0-12	12-18	1.40-1.55	14.00-42.00	0.11-0.13	0.0-2.9	1.0-2.0	.28	.32	4	3	86
	12-39	25-35	1.40-1.60	1.40-4.00	0.10-0.13	3.0-5.9	0.5-1.0	.10	.17			
	39-55	12-18	1.50-1.65	14.00-42.00	0.08-0.10	0.0-2.9	0.0-0.5	.15	.24			
	55-60	2-8	1.50-1.70	42.00-141.0	0.02-0.05	0.0-2.9	0.0-0.5	.05	.15			
Shantown-----	0-2	2-8	1.45-1.65	42.00-141.0	0.06-0.08	0.0-2.9	1.0-3.0	.10	.24	4	3	86
	2-11	2-8	1.45-1.60	42.00-141.0	0.06-0.10	0.0-2.9	1.0-3.0	.17	.28			
	11-33	8-12	1.50-1.70	42.00-141.0	0.06-0.08	0.0-2.9	0.5-1.0	.15	.28			
	33-49	2-8	1.55-1.75	42.00-141.0	0.06-0.08	0.0-2.9	0.0-0.5	.10	.20			
	49-60	2-6	1.60-1.75	141.0-705.0	0.02-0.03	0.0-2.9	0.0-0.5	.02	.10			
Toba-----	0-4	20-27	1.30-1.50	4.00-14.00	0.16-0.18	3.0-5.9	2.0-4.0	.37	.37	5	4L	86
	4-14	27-35	1.35-1.55	1.40-4.00	0.19-0.21	3.0-5.9	0.5-1.0	.28	.28			
	14-23	2-6	1.55-1.70	42.00-141.0	0.08-0.10	0.0-2.9	0.0-0.5	.20	.20			
	23-60	0-4	1.60-1.75	141.0-705.0	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
1750: Heechee-----	0-7	15-27	1.10-1.25	4.00-14.00	0.12-0.14	0.0-2.9	2.0-4.0	.20	.37	5	6	48
	7-20	25-35	1.30-1.45	1.40-4.00	0.06-0.14	0.0-2.9	1.0-2.0	.10	.43			
	20-60	10-20	1.40-1.60	42.00-141.0	0.03-0.06	0.0-2.9	0.5-1.0	.05	.28			
Welch-----	0-8	15-20	1.30-1.50	4.00-14.00	0.16-0.18	0.0-2.9	2.0-4.0	.32	.32	5	5	56
	8-60	27-35	1.30-1.50	1.40-4.00	0.16-0.21	3.0-5.9	0.5-4.0	.28	.32			
Welch-----	0-8	15-20	1.25-1.40	4.00-14.00	0.16-0.18	0.0-2.9	2.0-4.0	.32	.32	5	5	56
	8-60	27-35	1.30-1.45	1.40-4.00	0.16-0.21	3.0-5.9	0.5-4.0	.28	.32			
1760: Lykal-----	0-12	12-18	1.30-1.50	4.00-14.00	0.19-0.21	0.0-2.9	1.0-2.0	.55	.55	5	4L	86
	12-41	12-18	1.35-1.55	4.00-14.00	0.18-0.20	0.0-2.9	0.5-1.0	.49	.49			
	41-51	12-18	1.40-1.60	4.00-14.00	0.18-0.20	0.0-2.9	0.0-0.5	.49	.49			
	51-60	20-27	1.45-1.60	4.00-14.00	0.10-0.13	3.0-5.9	0.0-0.5	.32	.37			
Wendane-----	0-8	15-25	1.35-1.50	4.00-14.00	0.15-0.21	0.0-2.9	0.0-0.5	.55	.55	5	4L	86
	8-42	15-25	1.30-1.50	4.00-14.00	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43			
	42-60	27-35	1.30-1.50	1.40-4.00	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
James Canyon----	0-8	10-15	1.25-1.45	14.00-42.00	0.13-0.15	0.0-2.9	2.0-4.0	.37	.37	5	3	86
	8-33	18-27	1.30-1.50	4.00-14.00	0.12-0.15	3.0-5.9	2.0-4.0	.24	.43			
	33-60	10-15	1.50-1.65	14.00-42.00	0.13-0.15	0.0-2.9	1.0-2.0	.37	.37			
1770: Donna-----	0-7	15-25	1.25-1.35	4.00-14.00	0.18-0.20	0.0-2.9	1.0-3.0	.37	.43	2	6	48
	7-33	60-70	1.15-1.35	0.01-0.42	0.14-0.16	6.0-8.9	0.5-2.0	.20	.24			
	33-43	---	---	0.00-0.01	---	---	---	---	---			
	43-60	15-25	1.45-1.65	14.00-42.00	0.04-0.06	0.0-2.9	0.0-0.5	.20	.32			

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
McIvey-----	0-12 12-18 18-60	20-27 30-40 40-50	1.05-1.20 1.25-1.45 1.25-1.40	4.00-14.00 1.40-4.00 0.01-0.42	0.08-0.17 0.12-0.17 0.07-0.10	0.0-2.9 3.0-5.9 3.0-5.9	2.0-5.0 1.0-2.0 0.5-1.0	.17 .10 .05	.64 .43 .37	5	7	38
Heechee-----	0-7 7-30 30-60	15-27 25-35 10-25	1.40-1.60 1.40-1.60 1.55-1.70	4.00-14.00 1.40-4.00 42.00-141.0	0.10-0.13 0.06-0.14 0.02-0.06	0.0-2.9 0.0-2.9 0.0-2.9	2.0-4.0 1.0-2.0 0.0-1.0	.10 .10 .05	.32 .28 .20	5	7	38
1780: Schoer-----	0-3 3-16 16-23 23-33 33-60	20-27 35-45 27-40 25-35 2-8	1.25-1.45 1.30-1.50 1.35-1.55 1.40-1.60 1.50-1.70	4.00-14.00 0.42-1.40 1.40-4.00 1.40-4.00 141.0-705.0	0.15-0.17 0.13-0.16 0.11-0.16 0.08-0.11 0.02-0.04	3.0-5.9 6.0-8.9 3.0-5.9 3.0-5.9 0.0-2.9	2.0-4.0 1.0-2.0 0.5-1.0 0.5-1.0 0.0-0.5	.32 .20 .10 .05 .02	.37 .37 .37 .32 .15	3	6	48
Welch-----	0-8 8-60	15-20 27-35	1.30-1.50 1.30-1.50	4.00-14.00 1.40-4.00	0.16-0.18 0.16-0.21	0.0-2.9 3.0-5.9	2.0-4.0 0.5-4.0	.32 .28	.32 .32	5	5	56
1790: Donna-----	0-7 7-33 33-43 43-60	15-25 60-70 --- 15-25	1.25-1.35 1.15-1.35 --- 1.45-1.65	4.00-14.00 0.01-0.42 0.00-0.01 14.00-42.00	0.18-0.20 0.14-0.16 --- 0.04-0.06	0.0-2.9 6.0-8.9 --- 0.0-2.9	1.0-3.0 0.5-2.0 --- 0.0-0.5	.37 .20 --- .20	.43 .24 --- .32	2	6	48
Krenka-----	0-17 17-31 31-60	10-15 20-25 20-25	1.35-1.55 1.40-1.60 1.45-1.65	4.00-14.00 4.00-14.00 4.00-14.00	0.14-0.16 0.08-0.11 0.06-0.10	0.0-2.9 0.0-2.9 0.0-2.9	2.0-4.0 1.0-3.0 0.5-1.0	.32 .05 .02	.37 .37 .37	3	5	56
McIvey-----	0-12 12-18 18-60	20-27 30-40 40-50	1.05-1.20 1.25-1.45 1.25-1.40	4.00-14.00 1.40-4.00 0.01-0.42	0.08-0.17 0.12-0.17 0.07-0.10	0.0-2.9 3.0-5.9 3.0-5.9	2.0-5.0 1.0-2.0 0.5-1.0	.17 .10 .05	.64 .43 .37	5	7	38
1800: Chen-----	0-3 3-16 16-20	20-27 40-55 ---	1.10-1.25 1.25-1.40 ---	4.00-14.00 0.01-0.42 0.00-0.01	0.08-0.12 0.05-0.09 ---	0.0-2.9 3.0-5.9 ---	2.0-3.0 0.5-2.0 ---	.10 .10 ---	.32 .49 ---	1	7	38
Graley-----	0-7 7-19 19-23	10-20 35-45 ---	1.30-1.50 1.25-1.40 ---	4.00-14.00 0.42-1.40 0.00-0.01	0.11-0.15 0.07-0.10 ---	0.0-2.9 3.0-5.9 ---	1.0-2.0 0.5-1.0 ---	.28 .15 ---	.49 .49 ---	1	6	48
Rock Outcrop----	---	---	---	---	---	---	---	---	---	-	---	---
1810: Sumine-----	0-9 9-23 23-27	10-20 25-35 ---	1.20-1.40 1.40-1.60 ---	4.00-14.00 4.00-14.00 0.00-0.01	0.09-0.12 0.08-0.12 ---	0.0-2.9 0.0-2.9 ---	2.0-4.0 0.5-2.0 ---	.17 .15 ---	.43 .55 ---	2	7	38
Tusel-----	0-17 17-60	10-20 25-35	1.20-1.45 1.25-1.45	4.00-14.00 1.40-4.00	0.14-0.16 0.08-0.11	0.0-2.9 3.0-5.9	2.0-5.0 0.5-2.0	.24 .20	.43 .43	3	6	48
Hapgood-----	0-8 8-36 36-50 50-54	15-25 18-27 10-15 ---	1.05-1.20 1.15-1.35 1.35-1.55 ---	4.00-14.00 4.00-14.00 4.00-14.00 0.00-0.01	0.08-0.10 0.08-0.10 0.07-0.09 ---	0.0-2.9 0.0-2.9 0.0-2.9 ---	2.0-3.0 0.5-2.0 0.0-0.5 ---	.17 .10 .10 ---	.49 .24 .32 ---	3	7	38
1820: Hussa-----	0-16 16-60	20-25 25-35	1.10-1.30 1.20-1.40	4.00-14.00 1.40-4.00	0.17-0.19 0.16-0.19	0.0-2.9 3.0-5.9	2.0-3.0 0.5-2.0	.37 .32	.37 .32	5	4L	86
Halleck-----	0-14 14-41 41-60	18-25 20-35 8-18	1.15-1.35 1.25-1.45 1.50-1.65	4.00-14.00 1.40-4.00 42.00-141.0	0.19-0.21 0.19-0.21 0.06-0.08	3.0-5.9 3.0-5.9 0.0-2.9	2.0-4.0 2.0-4.0 0.0-1.0	.24 .32 .05	.24 .32 .20	4	4L	86
Welsum-----	0-11 11-25 25-60	20-27 27-35 0-5	1.15-1.35 1.20-1.40 1.40-1.60	4.00-14.00 1.40-4.00 141.0-705.0	0.19-0.21 0.19-0.21 0.03-0.05	3.0-5.9 3.0-5.9 0.0-2.9	2.0-4.0 1.0-4.0 0.0-2.0	.37 .37 .02	.37 .43 .20	3	4L	86

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
1831: Enko-----	0-2	10-18	1.35-1.45	14.00-42.00	0.11-0.15	0.0-2.9	1.0-2.0	.43	.49	5	3	86
	2-14	10-18	1.40-1.50	14.00-42.00	0.12-0.17	0.0-2.9	0.5-1.0	.43	.49			
	14-32	10-18	1.65-1.70	0.42-1.40	0.10-0.13	0.0-2.9	0.0-0.5	.37	.43			
	32-60	10-18	1.40-1.50	4.00-14.00	0.12-0.17	0.0-2.9	0.0-0.5	.43	.49			
Kelk-----	0-12	18-27	1.15-1.30	4.00-14.00	0.19-0.21	3.0-5.9	1.0-2.0	.55	.55	5	6	48
	12-20	18-27	1.40-1.60	0.42-1.40	0.19-0.21	3.0-5.9	0.0-0.5	.49	.49			
	20-60	18-27	1.40-1.60	4.00-14.00	0.18-0.20	3.0-5.9	0.0-0.5	.49	.49			
Enko-----	0-2	10-18	1.35-1.45	4.00-14.00	0.14-0.18	0.0-2.9	1.0-2.0	.43	.49	5	5	56
	2-14	10-18	1.40-1.50	14.00-42.00	0.12-0.17	0.0-2.9	0.5-1.0	.43	.49			
	14-32	10-18	1.65-1.70	0.42-1.40	0.10-0.13	0.0-2.9	0.0-0.5	.37	.43			
	32-60	10-18	1.40-1.50	4.00-14.00	0.12-0.17	0.0-2.9	0.0-0.5	.43	.49			
1840: Amene-----	0-12	20-27	1.05-1.25	4.00-14.00	0.10-0.15	0.0-2.9	2.0-4.0	.17	.49	1	6	48
	12-18	18-27	1.10-1.30	4.00-14.00	0.06-0.13	0.0-2.9	0.5-2.0	.15	.43			
	18-22	---	---	0.00-0.01	---	---	---	---	---			
Belsac-----	0-21	18-25	1.05-1.20	4.00-14.00	0.05-0.11	0.0-2.9	3.0-5.0	.10	.32	3	7	38
	21-35	18-25	1.15-1.30	4.00-14.00	0.05-0.11	0.0-2.9	2.0-3.0	.10	.32			
	35-39	---	---	0.01-0.42	---	---	---	---	---			
Chen-----	0-3	20-27	1.10-1.25	4.00-14.00	0.08-0.12	0.0-2.9	2.0-3.0	.10	.32	1	7	38
	3-16	40-55	1.25-1.40	0.01-0.42	0.05-0.09	3.0-5.9	0.5-2.0	.10	.49			
	16-20	---	---	0.00-0.01	---	---	---	---	---			
1850: Bullump-----	0-10	15-25	1.10-1.20	4.00-14.00	0.08-0.12	0.0-2.9	2.0-6.0	.15	.43	3	7	38
	10-49	25-35	1.35-1.45	1.40-4.00	0.09-0.14	0.0-2.9	0.5-3.0	.10	.32			
	49-53	---	---	0.00-0.01	---	---	---	---	---			
Cleavage-----	0-7	15-20	1.15-1.35	4.00-14.00	0.10-0.12	0.0-2.9	1.0-3.0	.05	.43	1	8	0
	7-15	20-35	1.25-1.45	1.40-4.00	0.10-0.12	0.0-2.9	0.5-1.0	.10	.49			
	15-19	---	---	0.00-0.01	---	---	---	---	---			
Rock Outcrop----	---	---	---	---	---	---	---	---	---	-	---	---
1861: Equis-----	0-6	40-50	1.25-1.45	0.01-0.42	0.09-0.11	6.0-8.9	1.0-2.0	.28	.28	5	4	86
	6-24	40-50	1.25-1.45	0.01-0.42	0.14-0.17	6.0-8.9	0.5-1.0	.28	.28			
	24-41	30-45	1.35-1.55	0.01-0.42	0.14-0.17	6.0-8.9	0.0-0.5	.24	.24			
	41-60	20-45	1.45-1.65	0.42-1.40	0.15-0.21	6.0-8.9	0.0-0.5	.32	.32			
Devilsgait-----	0-8	15-25	1.20-1.30	4.00-14.00	0.19-0.21	3.0-5.9	2.0-4.0	.37	.37	5	4L	86
	8-43	20-35	1.25-1.35	1.40-4.00	0.19-0.21	3.0-5.9	1.0-3.0	.32	.32			
	43-68	15-25	1.20-1.25	14.00-42.00	0.13-0.15	3.0-5.9	0.5-1.0	.28	.28			
1862: Equis-----	0-6	40-50	1.25-1.45	0.01-0.42	0.09-0.11	6.0-8.9	1.0-2.0	.28	.28	5	4	86
	6-24	40-50	1.25-1.45	0.01-0.42	0.14-0.17	6.0-8.9	0.5-1.0	.28	.28			
	24-41	30-45	1.35-1.55	0.01-0.42	0.14-0.17	6.0-8.9	0.0-0.5	.24	.24			
	41-60	20-45	1.45-1.65	0.42-1.40	0.15-0.21	6.0-8.9	0.0-0.5	.32	.32			
Equis-----	0-6	40-50	1.25-1.45	0.01-0.42	0.09-0.11	6.0-8.9	1.0-2.0	.28	.28	5	4	86
	6-24	40-50	1.25-1.45	0.01-0.42	0.14-0.17	6.0-8.9	0.5-1.0	.28	.28			
	24-41	30-45	1.35-1.55	0.01-0.42	0.14-0.17	6.0-8.9	0.0-0.5	.24	.24			
	41-60	20-45	1.45-1.65	0.42-1.40	0.15-0.21	6.0-8.9	0.0-0.5	.32	.32			
Kolda-----	0-4	18-25	1.20-1.40	4.00-14.00	0.19-0.21	3.0-5.9	3.0-4.0	.55	.55	5	4L	86
	4-11	22-27	1.30-1.50	4.00-14.00	0.19-0.21	3.0-5.9	1.0-3.0	.55	.55			
	11-60	40-50	1.40-1.60	0.42-1.40	0.14-0.17	6.0-8.9	0.0-1.0	.24	.24			
1870: Denied Access----	---	---	---	---	---	---	---	---	---	-	---	---

TABLE 11.--PHYSICAL PROPERTIES OF SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Ksat	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
1880: Water-----	In	Pct	g/cc	um/sec	In/in	Pct	Pct					
	---	---	---	---	---	---	---	---	---	-	---	---

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
0053:									
Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	1-5
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
Urmafot-----	0-7	18-27	15-25	---	7.9-8.4	10-30	0	0	0
	7-16	18-27	10-20	---	7.9-8.4	20-40	0	0	0
	16-29	---	---	---	---	---	---	---	---
	29-60	5-15	5.0-15	---	7.9-8.4	20-40	0	0.0-2.0	0
0062:									
Amtoft-----	0-4	15-25	10-20	---	7.9-9.0	10-20	0	0.0-2.0	0
	4-15	12-27	10-20	---	7.9-9.0	30-40	0	0.0-2.0	0
	15-25	---	---	---	---	---	---	---	---
Rock Outcrop----	---	---	---	---	---	---	---	---	---
Amtoft-----	0-2	15-25	10-20	---	7.9-9.0	10-20	0	0.0-2.0	0
	2-12	12-27	10-20	---	7.9-9.0	30-40	0	0.0-2.0	0
	12-16	---	---	---	---	---	---	---	---
0066:									
Zimbob-----	0-2	10-18	5.0-10	---	7.9-9.0	50-70	0	0	1-5
	2-11	10-18	5.0-10	---	7.9-9.0	50-70	0	0	1-5
	11-15	---	---	---	---	---	---	---	---
Zimbob-----	0-1	10-18	5.0-10	---	7.9-9.0	50-70	0	0	1-5
	1-6	10-18	5.0-10	---	7.9-9.0	50-70	0	0	1-5
	6-10	---	---	---	---	---	---	---	---
0067:									
Tecomar-----	0-2	18-27	10-20	---	7.9-9.0	10-30	0	0.0-2.0	0
	2-14	20-27	5.0-15	---	7.9-9.0	20-40	0	0.0-2.0	1-5
	14-18	---	---	---	---	---	---	---	---
Tecomar-----	0-2	18-27	10-20	---	7.9-9.0	10-30	0	0.0-2.0	0
	2-12	20-27	5.0-15	---	7.9-9.0	20-40	0	0.0-2.0	1-5
	12-16	---	---	---	---	---	---	---	---
Pookaloo-----	0-2	10-18	10-20	---	7.9-8.4	20-30	0	0	0
	2-14	10-18	10-20	---	7.9-8.4	30-50	0	0	0
	14-18	---	---	---	---	---	---	---	---
0069:									
Zimbob-----	0-2	10-18	5.0-10	---	7.9-9.0	50-70	0	0	1-5
	2-11	10-18	5.0-10	---	7.9-9.0	50-70	0	0	1-5
	11-15	---	---	---	---	---	---	---	---
Hyzen-----	0-3	8-18	5.0-20	---	7.9-8.4	20-35	0	0	0
	3-13	10-18	5.0-15	---	7.9-8.4	30-60	0	0	0
	13-17	---	---	---	---	---	---	---	---
Rock Outcrop----	---	---	---	---	---	---	---	---	---
0070:									
Stewval-----	0-2	12-18	5.0-13	---	7.4-8.4	1-5	0	0	0-2
	2-6	24-30	12-20	---	7.4-8.4	1-5	0	0	0-2
	6-10	---	---	---	---	---	---	---	---
Eastwell-----	0-5	10-18	5.0-15	---	8.5-9.0	0-5	0	0	1-5
	5-18	10-27	5.0-20	---	8.5-9.0	5-10	0	0.0-2.0	13-30
	18-27	---	---	---	---	---	---	---	---
	27-60	10-20	5.0-15	---	8.5-9.6	15-30	0	0.0-2.0	13-30

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
0071: Stewval-----	0-2 2-6 6-10	12-18 24-30 ---	5.0-13 12-20 ---	--- --- ---	7.4-8.4 7.4-8.4 ---	1-5 1-5 ---	0 0 ---	0 0 ---	0-2 0-2 ---
Wesfil-----	0-6 6-10	12-18 ---	10-15 ---	--- ---	7.4-9.0 ---	1-10 ---	0 ---	0.0-2.0 ---	1-5 ---
Rock Outcrop----	---	---	---	---	---	---	---	---	---
0080: Stewval-----	0-2 2-6 6-10	12-18 24-30 ---	5.0-13 12-20 ---	--- --- ---	7.4-8.4 7.4-8.4 ---	1-5 1-5 ---	0 0 ---	0 0 ---	0-2 0-2 ---
0092: Wesfil-----	0-6 6-10	12-18 ---	10-15 ---	--- ---	7.4-9.0 ---	1-10 ---	0 ---	0.0-2.0 ---	1-5 ---
Wintermute-----	0-3 3-15 15-53 53-60	8-18 8-18 8-18 27-35	5.0-15 5.0-15 5.0-15 10-20	--- --- --- ---	7.9-8.4 7.9-9.0 7.9-9.0 7.9-9.0	5-10 5-15 15-35 15-35	0 0 0 0	0 0 0 0	0-5 0-5 0-12 0-12
Okan-----	0-8 8-38 38-60	8-18 8-18 4-8	5.0-15 5.0-10 1.0-5.0	--- --- ---	7.9-8.4 7.9-8.4 8.5-9.0	1-5 5-15 5-15	0 0 0	0 0 0	0 0 0
0098: Wesfil-----	0-6 6-10	12-18 ---	10-15 ---	--- ---	7.4-9.0 ---	1-10 ---	0 ---	0.0-2.0 ---	1-5 ---
Tarnach-----	0-3 3-12 12-16	18-27 18-27 ---	15-25 15-25 ---	--- --- ---	7.9-9.0 7.9-9.0 ---	5-10 15-25 ---	0 0 ---	0.0-2.0 0.0-2.0 ---	0 0 ---
Wesfil-----	0-6 6-10	12-18 ---	10-15 ---	--- ---	7.4-9.0 ---	1-10 ---	0 ---	0.0-2.0 ---	1-5 ---
0099: Wesfil-----	0-6 6-10	12-18 ---	10-15 ---	--- ---	7.4-9.0 ---	1-10 ---	0 ---	0.0-2.0 ---	1-5 ---
Armespan-----	0-7 7-21 21-32 32-60	10-18 12-18 10-18 5-10	5.0-15 5.0-15 5.0-15 1.0-10	--- --- --- ---	7.9-9.0 7.9-9.0 7.9-9.0 7.9-9.0	5-10 5-10 10-35 10-35	0 0 0 0	2.0-4.0 8.0-16.0 8.0-16.0 2.0-4.0	1-5 1-5 5-12 5-12
Heist-----	0-4 4-40 40-60	8-18 8-18 8-18	5.0-15 5.0-15 5.0-10	--- --- ---	7.9-8.4 7.9-9.0 7.9-9.0	5-20 5-20 5-20	0 0 0	0.0-2.0 2.0-4.0 2.0-4.0	0-5 5-13 5-13
0100: Benin-----	0-7 7-60	15-25 40-50	10-15 25-30	--- ---	7.9-9.0 7.9-9.6	1-5 1-10	0 1-5	8.0-16.0 4.0-16.0	0-13 13-50
Mazuma-----	0-15 15-60	10-14 5-15	5.0-10 2.0-10	--- ---	7.9-9.6 7.9-9.6	1-5 1-10	0 1-2	0.0-4.0 4.0-16.0	5-12 13-45
0101: Toano-----	0-9 9-27 27-60	8-15 8-15 8-15	5.0-15 5.0-15 5.0-15	--- --- ---	7.9-9.0 7.9-9.0 7.9-9.0	10-20 15-30 15-30	0 0-1 0-1	0.0-2.0 0.0-4.0 8.0-16.0	0-2 0-2 1-12
Linoyer-----	0-9 9-60	12-18 12-18	5.0-15 5.0-15	--- ---	7.9-9.0 7.9-9.0	5-20 10-30	0 0	0.0-2.0 0.0-2.0	0 0

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
0103: Benin-----	0-7 7-60	15-25 40-50	10-15 25-30	--- ---	7.9-9.0 7.9-9.6	1-5 2-10	0 1-5	8.0-16.0 4.0-16.0	0-13 13-50
Playas-----	0-6 6-60	27-40 35-70	20-40 20-40	--- ---	8.5-9.0 8.5-9.0	1-10 1-10	1-10 1-10	4.0-16.0 4.0-16.0	13-45 13-45
0111: Gravier-----	0-3 3-60	8-18 8-18	5.0-15 5.0-15	--- ---	7.9-9.0 7.9-9.0	5-10 15-30	0 0	0.0-4.0 4.0-8.0	1-5 13-30
Armespan-----	0-7 7-21 21-32 32-60	10-18 12-18 10-18 5-10	5.0-15 5.0-15 5.0-15 1.0-10	--- --- --- ---	7.9-9.0 7.9-9.0 7.9-9.0 7.9-9.0	5-10 5-10 10-35 10-35	0 0 0 0	2.0-4.0 8.0-16.0 8.0-16.0 2.0-4.0	1-5 1-5 5-12 5-12
113: Gravier-----	0-3 3-44 44-60	8-18 8-18 0-5	10-20 5.0-15 5.0-10	--- --- ---	7.9-9.0 7.9-9.0 7.9-9.0	5-10 15-30 5-25	0 0 0	0.0-4.0 4.0-8.0 0.0-4.0	1-5 13-30 13-30
Gravier-----	0-3 3-60	8-18 8-18	5.0-15 5.0-15	--- ---	7.9-9.0 7.9-9.0	5-10 15-30	0 0	0.0-4.0 4.0-8.0	1-5 13-30
Jericho-----	0-4 4-14 14-28 28-60	15-20 10-18 --- 2-4	10-20 10-15 --- 1.0-5.0	--- --- --- ---	7.9-9.0 7.9-9.0 --- 7.9-9.0	15-25 20-30 --- 15-30	0 0 --- 0	0.0-2.0 0.0-2.0 --- 0.0-2.0	0-5 0-5 --- 0-5
0116: Gravier-----	0-3 3-44 44-60	8-18 8-18 0-5	10-20 5.0-15 5.0-10	--- --- ---	7.9-9.0 7.9-9.0 7.9-9.0	5-10 15-30 5-25	0 0 0	0.0-4.0 4.0-8.0 0.0-4.0	1-5 13-30 13-30
Izamatch-----	0-3 3-13 13-22 22-60	8-18 8-18 0-8 0-8	5.0-15 5.0-15 1.0-10 1.0-10	--- --- --- ---	7.9-9.0 8.5-9.0 7.9-9.6 8.5-9.6	20-30 20-30 20-30 30-40	0 0 0 0	0.0-2.0 0.0-2.0 0.0-2.0 0.0-4.0	0-5 0-5 5-12 13-30
Loray-----	0-12 12-60	10-15 0-8	5.0-15 1.0-8.0	--- ---	7.4-8.4 7.9-9.0	5-15 5-20	0 0	0.0-4.0 0.0-4.0	1-5 5-12
0118: Gravier-----	0-3 3-60	8-18 8-18	5.0-15 5.0-15	--- ---	7.9-9.0 7.9-9.0	5-10 15-30	0 0	0.0-4.0 4.0-8.0	1-5 13-30
Automal-----	0-8 8-49 49-60	15-25 10-20 5-15	15-25 10-20 5.0-10	--- --- ---	7.9-9.0 7.9-9.0 7.9-9.0	15-20 20-35 15-30	0 0 0	0 0.0-2.0 8.0-16.0	0 1-5 13-30
Zerk-----	0-2 2-16 16-60	12-17 12-17 0-10	5.0-10 5.0-10 1.0-5.0	--- --- ---	7.9-9.0 7.9-9.0 7.9-9.0	5-15 10-20 15-35	0 0 0	0.0-2.0 0.0-2.0 0.0-2.0	1-5 5-12 5-12
0119: Wintermute-----	0-3 3-15 15-53 53-60	12-18 8-18 8-18 27-35	8.0-15 5.0-15 5.0-15 10-20	--- --- --- ---	7.9-8.4 7.9-9.0 7.9-9.0 7.9-9.0	1-10 5-15 15-35 15-35	0 0 0 0	0 0 0 0	1-5 1-5 1-12 1-12
Linoyer-----	0-9 9-60	12-18 12-18	5.0-20 5.0-15	--- ---	7.9-9.0 7.9-9.0	5-20 10-30	0 0	0.0-2.0 0.0-2.0	0 0
0120: Izamatch-----	0-3 3-13 13-22 22-60	8-18 8-18 0-8 0-8	5.0-15 5.0-15 1.0-10 1.0-10	--- --- --- ---	7.9-9.0 8.5-9.0 7.9-9.6 8.5-9.6	20-30 20-30 20-30 30-40	0 0 0 0	0.0-2.0 0.0-2.0 0.0-2.0 0.0-4.0	0-5 0-5 5-12 13-30

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Armespan-----	0-7	10-18	5.0-15	---	7.9-9.0	5-10	0	2.0-4.0	1-5
	7-21	12-18	5.0-15	---	7.9-9.0	5-10	0	8.0-16.0	1-5
	21-32	10-18	5.0-15	---	7.9-9.0	10-35	0	8.0-16.0	5-12
	32-60	5-10	1.0-10	---	7.9-9.0	10-35	0	2.0-4.0	5-12
Cliffdown-----	0-6	10-18	5.0-10	---	8.5-9.0	15-40	0	0.0-2.0	1-5
	6-60	8-18	5.0-10	---	8.5-9.0	15-40	0	8.0-16.0	5-12
0122: Gravier-----	0-3	8-18	10-20	---	7.9-9.0	5-10	0	0.0-4.0	1-5
	3-60	8-18	5.0-15	---	7.9-9.0	15-30	0	4.0-8.0	13-30
Izamatch-----	0-3	8-18	5.0-15	---	7.9-9.0	20-30	0	0.0-2.0	0-5
	3-13	8-18	5.0-15	---	8.5-9.0	20-30	0	0.0-2.0	0-5
	13-22	0-8	1.0-10	---	7.9-9.6	20-30	0	0.0-2.0	5-12
	22-60	0-8	1.0-10	---	8.5-9.6	30-40	0	0.0-4.0	13-30
0130: Tocole-----	0-5	5-18	3.0-10	---	8.5-9.6	5-25	0	0.0-4.0	5-12
	5-44	5-18	2.0-10	---	8.5-9.6	10-40	0	4.0-8.0	15-35
	44-61	8-18	2.0-10	---	8.5-9.6	10-40	1-2	16.0-32.0	15-35
Benin-----	0-7	15-25	10-15	---	7.9-9.0	1-5	0	8.0-16.0	0-13
	7-60	40-50	25-30	---	7.9-9.6	1-10	1-5	4.0-16.0	13-50
0140: Gollaher-----	0-5	15-27	10-25	---	7.4-8.4	10-20	0	0	0
	5-10	15-27	5.0-20	---	7.4-8.4	25-40	0	0.0-2.0	0
	10-14	---	---	---	---	---	---	---	---
Belsac-----	0-21	18-25	15-25	---	6.6-7.8	0	0	0	0
	21-35	18-25	15-20	---	7.4-8.4	0-10	0	0	0
	35-39	---	---	---	---	---	---	---	---
0151: Hopeka-----	0-10	18-27	10-20	---	7.9-9.0	30-50	0	0.0-2.0	0
	10-14	---	---	---	---	---	---	---	---
Amena-----	0-12	20-27	10-25	---	7.4-9.0	10-20	0	0.0-2.0	0
	12-18	18-27	10-20	---	7.9-9.0	35-45	0	0.0-2.0	0
	18-22	---	---	---	---	---	---	---	---
Rock Outcrop----	---	---	---	---	---	---	---	---	---
0154: Hopeka-----	0-10	18-27	10-20	---	7.9-9.0	30-50	0	0.0-2.0	0
	10-14	---	---	---	---	---	---	---	---
Tecomar-----	0-2	18-27	10-20	---	7.9-9.0	10-30	0	0.0-2.0	0
	2-14	18-27	5.0-15	---	7.9-9.0	20-40	0	0.0-2.0	1-5
	14-18	---	---	---	---	---	---	---	---
0160: Saltair-----	0-11	20-27	10-15	---	7.9-9.0	15-40	0	16.0-32.0	13-90
	11-60	20-35	10-20	---	7.9-9.0	15-40	0	16.0-32.0	13-90
Kawich-----	0-2	0-5	1.0-5.0	---	8.5-9.6	1-5	1-5	4.0-8.0	1-5
	2-60	0-5	1.0-5.0	---	8.5-9.6	1-10	1-5	4.0-8.0	1-5
0161: Saltair-----	0-11	20-27	10-15	---	7.9-9.0	15-40	0	16.0-32.0	13-90
	11-60	20-35	10-20	---	7.9-9.0	15-40	0	16.0-32.0	13-90
Playas-----	0-6	35-70	---	---	8.5-9.0	---	---	16.0-32.0	---
	6-60	35-70	---	---	8.5-9.0	---	---	16.0-32.0	---

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
0171: Loray-----	0-12	10-15	5.0-15	---	7.4-8.4	5-15	0	0.0-4.0	1-5
	12-60	0-8	1.0-8.0	---	7.9-9.0	5-20	0	0.0-4.0	5-12
Gravier-----	0-3	8-18	5.0-15	---	7.9-9.0	5-10	0	0.0-4.0	1-5
	3-44	8-18	5.0-15	---	7.9-9.0	15-30	0	4.0-8.0	13-30
	44-60	0-5	5.0-10	---	7.9-9.0	5-25	0	0.0-4.0	13-30
Toano-----	0-9	8-15	10-20	---	7.9-9.0	10-20	0	0.0-2.0	0
	9-27	8-15	5.0-15	---	7.9-9.0	15-30	0-1	0.0-4.0	0-2
	27-60	8-15	5.0-15	---	7.9-9.0	15-30	0-1	8.0-16.0	1-12
0173: Cliffdown-----	0-6	10-18	5.0-10	---	8.5-9.0	15-40	0	0.0-2.0	1-5
	6-60	8-18	5.0-10	---	8.5-9.0	15-40	0	8.0-16.0	5-12
Armespan-----	0-7	10-18	5.0-15	---	7.9-9.0	5-10	0	2.0-4.0	1-5
	7-21	12-18	5.0-15	---	7.9-9.0	5-10	0	8.0-16.0	1-5
	21-32	10-18	5.0-15	---	7.9-9.0	10-35	0	8.0-16.0	5-12
	32-60	5-10	1.0-10	---	7.9-9.0	10-35	0	2.0-4.0	5-12
Izamatch-----	0-3	8-18	5.0-15	---	7.9-9.0	20-30	0	0.0-2.0	0-5
	3-13	8-18	5.0-15	---	8.5-9.0	20-30	0	0.0-2.0	0-5
	13-22	0-8	1.0-10	---	7.9-9.6	20-30	0	0.0-2.0	5-12
	22-60	0-8	1.0-10	---	8.5-9.6	30-40	0	0.0-4.0	13-30
0174: Wintermute-----	0-3	8-18	5.0-15	---	7.9-8.4	5-10	0	0	1-5
	3-15	8-18	5.0-15	---	7.9-9.0	5-15	0	0	1-5
	15-53	8-18	5.0-15	---	7.9-9.0	15-35	0	0	1-12
	53-60	27-35	10-20	---	7.9-9.0	15-35	0	0	1-12
Linoyer-----	0-9	12-18	5.0-15	---	7.9-9.0	5-20	0	0.0-2.0	0
	9-60	12-18	5.0-15	---	7.9-9.0	10-30	0	0.0-2.0	0
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0
0175: Loray-----	0-12	10-15	5.0-15	---	7.4-8.4	5-15	0	0.0-4.0	1-5
	12-60	0-8	1.0-8.0	---	7.9-9.0	5-20	0	0.0-4.0	5-12
Wintermute-----	0-3	8-18	5.0-15	---	7.9-8.4	5-10	0	0	1-5
	3-15	8-18	5.0-15	---	7.9-9.0	5-15	0	0	1-5
	15-53	8-18	5.0-15	---	7.9-9.0	15-35	0	0	1-12
	53-60	27-35	10-20	---	7.9-9.0	15-35	0	0	1-12
0176: Loray-----	0-12	10-15	5.0-15	---	7.4-8.4	5-15	0	0.0-4.0	1-5
	12-60	0-8	1.0-8.0	---	7.9-9.0	5-20	0	0.0-4.0	5-12
Zerk-----	0-2	12-17	5.0-10	---	7.9-9.0	5-15	0	0.0-2.0	1-5
	2-16	12-17	5.0-10	---	7.9-9.0	10-20	0	0.0-2.0	5-12
	16-60	0-10	1.0-5.0	---	7.9-9.0	15-35	0	0.0-2.0	5-12
Zerk-----	0-2	12-17	5.0-10	---	7.9-9.0	5-15	0	0.0-2.0	1-5
	2-16	12-17	5.0-10	---	7.9-9.0	10-20	0	0.0-2.0	5-12
	16-60	0-10	1.0-5.0	---	7.9-9.0	15-35	0	0.0-2.0	5-12
0181: Peeko-----	0-4	10-27	5.0-20	---	7.9-8.4	1-10	0	0.0-2.0	0
	4-10	18-27	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	10-30	---	---	---	---	---	---	---	---

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Dewar-----	0-3	18-25	10-25	---	6.6-8.4	0-1	0	0.0-2.0	0-5
	3-13	27-35	15-30	---	6.6-8.4	0-5	0	0.0-4.0	1-12
	13-19	15-27	10-25	---	7.9-8.4	5-15	0	0.0-8.0	1-12
	19-40	---	---	---	---	---	---	---	---
Peeko-----	0-4	10-27	5.0-20	---	7.9-8.4	1-10	0	0.0-2.0	0
	4-10	18-27	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	10-30	---	---	---	---	---	---	---	---
0182: Peeko-----	0-4	18-27	10-20	---	7.9-8.4	1-10	0	0.0-2.0	0
	4-10	18-27	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	10-30	---	---	---	---	---	---	---	---
Peeko-----	0-4	18-27	10-20	---	7.9-8.4	1-10	0	0.0-2.0	0
	4-10	18-27	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	10-30	---	---	---	---	---	---	---	---
Gance-----	0-5	20-25	15-25	---	6.6-8.4	0	0	0	0
	5-20	35-55	20-45	---	7.4-8.4	0-10	0	0.0-4.0	0
	20-60	10-20	5.0-15	---	7.9-9.0	10-25	0	0.0-8.0	0
0183: Peeko-----	0-4	10-27	5.0-20	---	7.9-8.4	1-10	0	0.0-2.0	0
	4-10	18-27	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	10-30	---	---	---	---	---	---	---	---
Enko-----	0-2	10-18	10-25	---	6.6-8.4	0	0	0.0-4.0	0-5
	2-14	10-18	10-25	---	6.6-8.4	0	0	0.0-4.0	1-12
	14-32	10-18	10-25	---	7.4-9.0	0-15	0	4.0-16.0	5-12
	32-60	10-18	10-25	---	7.9-9.6	0-5	0	4.0-16.0	13-30
Izar-----	0-3	18-25	15-20	---	7.4-8.4	1-10	0	0.0-2.0	0
	3-12	18-25	10-15	---	7.4-8.4	5-30	0	0.0-2.0	0
	12-16	---	---	---	---	---	---	---	---
0185: Peeko-----	0-4	18-27	10-20	---	7.9-8.4	1-10	0	0.0-2.0	0
	0-4	18-27	10-20	---	7.9-8.4	1-10	0	0.0-2.0	0
	4-10	18-27	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	4-10	18-27	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	10-30	---	---	---	---	---	---	---	---
	10-30	---	---	---	---	---	---	---	---
Chiara-----	0-4	10-18	15-28	---	6.6-8.4	0	0	0.0-2.0	0-5
	4-11	10-18	15-28	---	6.6-9.0	0-25	0	0.0-4.0	5-25
	11-15	---	---	---	---	---	---	---	---
0186: Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	1-5
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
Pharo-----	0-13	15-20	15-25	---	7.4-8.4	5-15	0	0	0
	13-36	10-20	10-15	---	7.9-9.0	40-55	0	0	0
	36-60	2-8	5.0-10	---	7.9-9.0	30-40	0	0	0
Hundraw-----	0-5	8-18	5.0-15	---	7.9-8.4	5-10	0	0.0-2.0	0
	5-10	8-18	5.0-15	---	7.9-8.4	5-15	0	0.0-2.0	0
	10-14	---	---	---	---	---	---	---	---
0187: Peeko-----	0-4	10-27	5.0-20	---	7.9-8.4	1-10	0	0.0-2.0	0
	4-10	18-27	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	10-30	---	---	---	---	---	---	---	---

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Izar-----	0-1	18-25	15-20	---	7.4-8.4	1-10	0	0.0-2.0	0
	1-10	18-25	10-15	---	7.4-8.4	5-30	0	0.0-2.0	0
	10-14	---	---	---	---	---	---	---	---
Izar-----	0-3	18-25	15-20	---	7.4-8.4	1-10	0	0.0-2.0	0
	3-12	18-25	10-15	---	7.4-8.4	5-30	0	0.0-2.0	0
	12-16	---	---	---	---	---	---	---	---
0188: Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	1-5
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
Automal-----	0-8	15-25	15-25	---	7.9-9.0	15-20	0	0	0
	8-49	10-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	1-5
	49-60	5-15	5.0-10	---	7.9-9.0	15-30	0	8.0-16.0	13-30
Izar-----	0-1	18-25	15-20	---	7.4-8.4	1-10	0	0.0-2.0	0
	1-10	18-25	10-15	---	7.4-8.4	5-30	0	0.0-2.0	0
	10-14	---	---	---	---	---	---	---	---
0192: Hutchley-----	0-4	12-25	11-21	---	6.6-7.8	0	0	0	0
	4-13	28-35	17-22	---	6.6-7.8	0	0	0	0
	13-17	---	---	---	---	---	---	---	---
Simon-----	0-10	10-20	10-20	---	6.6-7.3	0	0	0	0
	10-15	18-35	10-25	---	6.1-7.3	0	0	0	0
	15-47	35-45	20-30	---	6.1-7.3	0	0	0	0
	47-60	20-35	10-20	---	6.6-7.3	0	0	0	0
0201: Tecomar-----	0-2	18-27	10-20	---	7.9-9.0	10-30	0	0.0-2.0	0
	2-14	18-27	5.0-15	---	7.9-9.0	20-40	0	0.0-2.0	1-5
	14-18	---	---	---	---	---	---	---	---
Hopeka-----	0-10	18-27	10-20	---	7.9-9.0	30-50	0	0.0-2.0	0
	10-14	---	---	---	---	---	---	---	---
Rock Outcrop---	---	---	---	---	---	---	---	---	---
0203: Tecomar-----	0-2	18-27	10-20	---	7.9-9.0	10-30	0	0.0-2.0	0
	2-14	20-27	5.0-15	---	7.9-9.0	20-40	0	0.0-2.0	1-5
	14-18	---	---	---	---	---	---	---	---
Pookaloo-----	0-2	10-18	10-20	---	7.9-8.4	20-30	0	0	0
	2-14	10-18	10-20	---	7.9-8.4	30-50	0	0	0
	14-18	---	---	---	---	---	---	---	---
Pharo-----	0-13	15-20	15-25	---	7.4-8.4	5-15	0	0	0
	13-36	10-20	10-15	---	7.9-9.0	40-55	0	0	0
	36-60	2-8	5.0-10	---	7.9-9.0	30-40	0	0	0
0210: Mazuma-----	0-15	10-14	5.0-10	---	7.9-9.6	1-5	0	0.0-4.0	5-12
	15-60	5-15	2.0-10	---	7.9-9.6	1-10	1-2	4.0-16.0	13-45
Hardhat-----	0-9	8-18	5.0-15	---	7.9-9.0	1-10	0	0.0-2.0	1-5
	9-19	8-18	5.0-15	---	7.9-9.0	10-20	0	0.0-2.0	1-5
	19-40	5-15	5.0-15	---	7.9-9.0	10-20	1-2	2.0-8.0	5-12
	40-60	5-15	5.0-15	---	7.9-9.0	10-20	1-5	16.0-32.0	13-30
Loray-----	0-12	10-15	5.0-15	---	7.4-8.4	5-15	0	0.0-4.0	1-5
	12-60	0-8	1.0-8.0	---	7.9-9.0	5-20	0	0.0-4.0	5-12

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
0211: Valmy-----	0-9	18-27	10-25	---	7.9-9.6	1-10	0	4.0-8.0	5-12
	9-40	5-15	5.0-15	---	8.5-9.6	1-10	0	4.0-8.0	13-30
	40-61	5-18	5.0-15	---	8.5-9.6	1-10	1-2	4.0-8.0	13-30
Enko-----	0-2	10-18	10-25	---	6.6-8.4	0	0	0.0-4.0	0-5
	2-14	10-18	10-25	---	6.6-8.4	0	0	0.0-4.0	1-12
	14-32	10-18	10-25	---	7.4-9.0	0-15	0	4.0-16.0	5-12
	32-60	10-18	10-25	---	7.9-9.6	0-5	0	4.0-16.0	13-30
0230: Zafod-----	0-7	15-20	1.0-10	---	7.9-8.4	1-5	0	0	0
	7-28	5-15	1.0-5.0	---	8.5-9.0	5-10	0	0	1-5
	28-38	---	---	---	---	---	---	---	---
	38-60	2-8	0.0-5.0	---	7.9-9.0	5-10	0	0	1-5
Pyrat-----	0-6	10-18	5.0-15	---	7.9-9.0	1-10	0	0.0-2.0	0
	6-14	10-18	5.0-10	---	7.9-8.4	5-15	0	2.0-4.0	0
	14-21	10-18	5.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	21-42	10-18	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
	42-60	5-10	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	1-5
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
0231: Dacker-----	0-6	15-25	20-25	---	6.6-7.8	0	0	0	0
	6-11	27-35	25-35	---	7.4-8.4	0	0	0.0-4.0	0-5
	11-18	25-33	25-35	---	7.4-8.4	0	0	0.0-4.0	0-5
	18-24	18-25	20-25	---	7.9-9.0	1-10	0	4.0-8.0	1-12
	24-49	---	---	---	---	---	---	---	---
Nevador-----	0-3	8-18	10-20	---	6.6-7.8	0	0	0	0
	3-13	25-35	20-25	---	6.6-8.4	1-5	0	2.0-4.0	1-5
	13-60	5-15	5.0-10	---	7.4-9.0	1-5	0	2.0-8.0	5-12
Kelk-----	0-12	18-27	15-25	---	6.6-8.4	0-5	0	0.0-4.0	1-5
	12-20	18-27	20-30	---	7.4-8.4	1-5	0	0.0-8.0	5-12
	20-60	18-27	20-30	---	8.5-9.0	1-5	0	4.0-16.0	13-30
0240: Hundraw-----	0-5	8-18	5.0-15	---	7.9-8.4	5-10	0	0.0-2.0	0
	5-10	8-18	5.0-15	---	7.9-8.4	5-15	0	0.0-2.0	0
	10-14	---	---	---	---	---	---	---	---
Cobre-----	0-7	15-25	10-20	---	7.4-8.4	0-5	0	0.0-2.0	0
	7-15	15-25	10-20	---	7.4-8.4	0-5	0	0.0-2.0	0
	15-34	8-18	5.0-10	---	7.4-8.4	0-5	0	0.0-2.0	0
	34-38	---	---	---	---	---	---	---	---
0241: Hundraw-----	0-5	8-18	5.0-15	---	7.9-8.4	5-10	0	0.0-2.0	0
	5-10	8-18	5.0-15	---	7.9-8.4	5-15	0	0.0-2.0	0
	10-14	---	---	---	---	---	---	---	---
Peeko-----	0-4	10-27	5.0-20	---	7.9-8.4	1-10	0	0.0-2.0	0
	4-10	18-27	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	10-30	---	---	---	---	---	---	---	---
Kzin-----	0-3	15-25	10-25	---	7.9-9.0	15-25	0	0.0-2.0	1-5

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

[illegible]

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0
0260:									
Dewar-----	0-3	18-25	10-25	---	6.6-8.4	0-1	0	0.0-2.0	0-5
	3-13	27-35	15-30	---	6.6-8.4	0-5	0	0.0-4.0	1-12
	13-19	15-27	10-25	---	7.9-8.4	5-15	0	0.0-8.0	1-12
	19-40	---	---	---	---	---	---	---	---
Chiara-----	0-4	10-18	15-28	---	6.6-8.4	0	0	0.0-2.0	0-5
	4-11	10-18	15-28	---	6.6-9.0	0-25	0	0.0-4.0	5-25
	11-15	---	---	---	---	---	---	---	---
Hunnton-----	0-8	10-25	10-25	---	7.4-8.4	0	0	0.0-4.0	0-5
	8-12	20-30	15-25	---	7.9-8.4	0	0	0.0-4.0	0-5
	12-21	45-55	35-55	---	7.4-8.4	0-5	0	0.0-4.0	1-5
	21-40	---	---	---	---	---	---	---	---
0270:									
Chiara-----	0-4	10-18	15-28	---	6.6-8.4	0	0	0.0-2.0	0-5
	4-11	10-18	15-28	---	6.6-9.0	0-25	0	0.0-4.0	5-25
	11-15	---	---	---	---	---	---	---	---
Kelk-----	0-12	18-27	15-25	---	6.6-8.4	0-5	0	0.0-4.0	1-5
	12-20	18-27	20-30	---	7.4-8.4	1-5	0	0.0-8.0	5-12
	20-60	18-27	20-30	---	8.5-9.0	1-5	0	4.0-16.0	13-30
Kelk-----	0-12	18-27	15-25	---	6.6-8.4	0-5	0	0.0-4.0	1-5
	12-20	18-27	20-30	---	7.4-8.4	1-5	0	0.0-8.0	5-12
	20-60	18-27	20-30	---	8.5-9.0	1-5	0	4.0-16.0	13-30
0273:									
Chiara-----	0-4	10-18	15-28	---	6.6-8.4	0	0	0.0-2.0	0-5
	4-11	10-18	15-28	---	6.6-9.0	0-25	0	0.0-4.0	5-25
	11-15	---	---	---	---	---	---	---	---
Dewar-----	0-3	18-25	10-25	---	6.6-8.4	0-1	0	0.0-2.0	0-5
	3-13	27-35	15-30	---	6.6-8.4	0-5	0	0.0-4.0	1-12
	13-19	15-27	10-25	---	7.9-8.4	5-15	0	0.0-8.0	1-12
	19-40	---	---	---	---	---	---	---	---
Enko-----	0-2	10-18	10-25	---	6.6-8.4	0	0	0.0-4.0	0-5
	2-14	10-18	10-25	---	6.6-8.4	0	0	0.0-4.0	1-12
	14-32	10-18	10-25	---	7.4-9.0	0-15	0	4.0-16.0	5-12
	32-60	10-18	10-25	---	7.9-9.6	0-5	0	4.0-16.0	13-30
0276:									
Chiara-----	0-4	10-18	15-28	---	6.6-8.4	0	0	0.0-2.0	0-5
	4-11	10-18	15-28	---	6.6-9.0	0-25	0	0.0-4.0	5-25
	11-15	---	---	---	---	---	---	---	---
Peeko-----	0-4	10-27	5.0-20	---	7.9-8.4	1-10	0	0.0-2.0	0
	4-10	18-27	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	10-30	---	---	---	---	---	---	---	---
Urmafot-----	0-7	18-27	15-25	---	7.9-8.4	10-30	0	0	0
	7-16	18-27	10-20	---	7.9-8.4	20-40	0	0	0
	16-29	---	---	---	---	---	---	---	---
	29-60	5-15	5.0-15	---	7.9-8.4	20-40	0	0.0-2.0	0
0279:									
Chiara-----	0-4	10-18	15-28	---	6.6-8.4	0	0	0.0-2.0	0-5
	4-11	10-18	15-28	---	6.6-9.0	0-25	0	0.0-4.0	5-25
	11-15	---	---	---	---	---	---	---	---

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Parisa-----	0-5	8-18	5.0-15	---	7.9-9.0	1-5	0	0.0-2.0	1-5
	5-36	8-18	5.0-15	---	7.9-9.0	15-40	0	0.0-2.0	5-12
	36-55	---	---	---	---	---	---	---	---
	55-60	0-8	1.0-5.0	---	7.9-9.0	15-30	0	2.0-8.0	13-30
Enko-----	0-2	10-18	10-30	---	6.6-8.4	0	0	0.0-4.0	0-5
	2-14	10-18	10-25	---	6.6-8.4	0	0	0.0-4.0	1-12
	14-32	10-18	10-25	---	7.4-9.0	0-5	0	0.0-8.0	5-12
	32-60	10-18	10-25	---	7.4-9.0	0-15	0	4.0-16.0	5-12
0280: Oupico-----	0-4	10-15	8.0-16	---	7.9-8.4	1-5	0	0.0-2.0	1-5
	4-25	8-18	5.0-15	---	7.9-8.4	5-20	0	0.0-4.0	5-12
	25-49	---	---	---	---	---	---	---	---
	49-62	5-10	3.0-10	---	8.5-9.0	1-10	0	0.0-4.0	13-30
Enko-----	0-14	10-18	10-20	---	7.4-8.4	0	0	0.0-2.0	0-5
	14-53	10-18	10-20	---	7.9-9.0	0-10	0	0.0-4.0	5-12
	53-63	2-10	1.0-10	---	8.5-9.0	1-10	0	2.0-8.0	13-45
0282: Shabliss-----	0-2	10-18	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	2-15	5-15	5.0-15	---	6.6-9.0	5-25	0	0.0-4.0	5-12
	15-31	---	---	---	---	---	---	---	---
	31-60	0-5	2.0-10	---	7.9-9.6	10-30	0	4.0-8.0	13-30
Pyrat-----	0-6	12-20	5.0-15	---	7.9-8.4	1-10	0	2.0-4.0	0
	6-14	10-18	5.0-10	---	7.9-8.4	5-15	0	2.0-4.0	0
	14-21	10-18	5.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	21-42	10-18	1.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	42-60	5-10	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0
0310: Sonoma-----	0-6	27-35	15-25	---	9.1-9.6	3-12	0	2.0-4.0	1-5
	6-48	20-35	15-20	---	7.9-9.6	3-12	0	0.0-2.0	5-12
	48-60	40-50	25-30	---	7.9-9.6	3-12	0	0.0-2.0	5-12
Devilsgait-----	0-8	15-25	15-30	---	7.9-8.4	1-5	0	0.0-2.0	1-5
	8-43	20-35	15-35	---	7.9-8.4	0-5	0	0.0-2.0	1-5
	43-68	15-25	10-25	---	7.4-8.4	0-5	0	0.0-2.0	1-5
Sonoma-----	0-6	20-27	15-25	---	7.4-8.4	3-12	0	2.0-4.0	5-12
	6-60	25-35	15-30	---	7.9-9.0	3-12	0	2.0-8.0	0-12
0311: Sonoma-----	0-8	20-27	15-20	---	7.9-9.0	3-15	0	0.0-4.0	1-5
	8-60	25-35	20-25	---	7.9-9.0	3-15	0-1	0.0-4.0	5-12
Kelk-----	0-12	18-27	15-25	---	6.6-8.4	0-5	0	0.0-4.0	1-5
	12-20	18-27	20-30	---	7.4-8.4	1-5	0	0.0-8.0	5-12
	20-60	18-27	20-30	---	8.5-9.0	1-5	0	4.0-16.0	13-30
0330: Kzin-----	0-3	15-25	10-25	---	7.9-9.0	15-25	0	0.0-2.0	1-5
	3-9	15-25	10-20	---	7.9-9.0	15-30	0	0.0-2.0	1-5
	9-13	---	---	---	---	---	---	---	---
Holborn-----	0-3	18-27	10-25	---	7.9-9.0	1-10	0	0.0-2.0	0
	3-7	18-30	10-25	---	7.9-9.0	15-30	0	0.0-2.0	0
	7-17	---	---	---	---	---	---	---	---

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Kzin-----	0-3	15-25	10-25	---	7.9-9.0	15-25	0	0.0-2.0	1-5
	3-9	15-25	10-20	---	7.9-9.0	15-30	0	0.0-2.0	1-5
	9-13	---	---	---	---	---	---	---	---
0331:									
Kzin-----	0-3	15-25	10-25	---	7.9-9.0	15-25	0	0.0-2.0	1-5
	3-9	15-25	10-20	---	7.9-9.0	15-30	0	0.0-2.0	1-5
	9-13	---	---	---	---	---	---	---	---
Cobra-----	0-7	15-25	10-20	---	7.4-8.4	0-5	0	0.0-2.0	0
	7-15	15-25	10-20	---	7.4-8.4	0-5	0	0.0-2.0	0
	15-34	8-18	5.0-10	---	7.4-8.4	0-5	0	0.0-2.0	0
	34-38	---	---	---	---	---	---	---	---
Jackpot-----	0-4	5-10	10-15	---	6.6-7.8	0	0	0	0
	4-11	5-10	10-15	---	6.6-7.8	0	0	0	0
	11-15	---	---	---	---	---	---	---	---
0333:									
Kzin-----	0-3	15-25	10-25	---	7.9-9.0	15-25	0	0.0-2.0	1-5
	3-8	15-25	10-20	---	7.9-9.0	15-30	0	0.0-2.0	1-5
	8-12	---	---	---	---	---	---	---	---
Holborn-----	0-3	18-27	10-25	---	7.9-9.0	1-10	0	0.0-2.0	0
	3-7	18-30	10-25	---	7.9-9.0	15-30	0	0.0-2.0	0
	7-17	---	---	---	---	---	---	---	---
Onkeyo-----	0-8	18-27	10-25	---	7.4-8.4	1-10	0	0	0
	8-17	25-35	10-20	---	7.4-8.4	15-25	0	0.0-2.0	0
	17-21	---	---	---	---	---	---	---	---
0340:									
Shuttle-----	0-6	8-18	10-20	---	7.9-9.0	1-10	0	0.0-2.0	1-5
	6-19	8-18	10-20	---	7.9-9.0	5-15	0	4.0-16.0	13-30
	19-45	5-15	5.0-20	---	7.9-9.0	10-20	1-5	16.0-32.0	13-45
	45-60	---	---	---	---	---	---	---	---
Hardhat-----	0-9	8-18	5.0-15	---	7.9-9.0	1-10	0	0.0-2.0	1-5
	9-19	8-18	5.0-15	---	7.9-9.0	10-20	0	0.0-2.0	1-5
	19-40	5-15	5.0-15	---	7.9-9.0	10-20	1-2	2.0-8.0	5-12
	40-60	5-15	5.0-15	---	7.9-9.0	10-20	1-5	16.0-32.0	13-30
Shuttle-----	0-5	8-15	10-20	---	7.9-9.0	1-10	0	0.0-2.0	1-5
	5-15	8-18	10-20	---	7.9-9.0	5-15	0	4.0-16.0	13-30
	15-42	5-15	5.0-15	---	7.9-9.0	10-20	1-5	16.0-32.0	13-45
	42-61	5-15	5.0-15	---	7.9-9.0	10-25	1-5	16.0-32.0	30-45
0350:									
Jericho-----	0-4	10-18	10-15	---	7.9-9.0	15-25	0	0.0-2.0	0-5
	4-14	10-18	10-15	---	7.9-9.0	20-30	0	0.0-2.0	0-5
	14-28	---	---	---	---	---	---	---	---
	28-60	5-10	4.0-8.0	---	7.9-9.0	15-30	0	0.0-2.0	0-5
Jericho-----	0-4	10-18	10-15	---	7.9-9.0	15-25	0	0.0-2.0	0-5
	4-14	10-18	10-15	---	7.9-9.0	20-30	0	0.0-2.0	0-5
	14-28	---	---	---	---	---	---	---	---
	28-60	5-10	4.0-8.0	---	7.9-9.0	15-30	0	0.0-2.0	0-5
0351:									
Shabliss-----	0-2	10-18	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	2-15	5-15	5.0-15	---	6.6-9.0	5-25	0	0.0-4.0	5-12
	15-31	---	---	---	---	---	---	---	---
	31-60	0-5	2.0-10	---	7.9-9.6	10-30	0	4.0-8.0	13-30
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Eastwell-----	0-5	10-18	5.0-15	---	8.5-9.0	0-5	0	0	1-5
	5-18	10-27	5.0-20	---	8.5-9.0	5-10	0	0.0-2.0	13-30
	18-27	---	---	---	---	---	---	---	---
	27-60	10-20	5.0-15	---	8.5-9.6	15-30	0	0.0-2.0	13-30
0355: Shabliss-----	0-2	10-18	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	2-15	5-15	5.0-15	---	6.6-9.0	5-25	0	0.0-4.0	5-12
	15-31	---	---	---	---	---	---	---	---
	31-60	0-5	2.0-10	---	7.9-9.6	10-30	0	4.0-8.0	13-30
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0
0370: Toano-----	0-9	8-15	5.0-15	---	7.9-9.0	10-20	0	0.0-2.0	0-2
	9-27	8-15	5.0-15	---	7.9-9.0	15-30	0-1	0.0-4.0	0-2
	27-60	8-15	5.0-15	---	7.9-9.0	15-30	0-1	8.0-16.0	1-12
Tulase-----	0-2	8-18	10-15	---	7.9-8.4	5-10	0	0.0-2.0	0
	2-60	8-18	5.0-15	---	7.9-9.0	10-15	0	0.0-2.0	1-5
0371: Linoyer-----	0-9	12-18	5.0-15	---	7.9-9.0	5-20	0	0.0-2.0	0
	9-60	12-18	5.0-15	---	7.9-9.0	10-30	0	0.0-2.0	0
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0
0373: Timpie-----	0-8	18-27	10-15	---	8.5-9.0	15-40	0	0.0-4.0	5-13
	8-19	18-27	10-15	---	8.5-9.6	15-40	0	4.0-8.0	13-50
	19-60	18-27	10-15	---	8.5-9.6	15-40	0	16.0-32.0	13-50
Piltown-----	0-10	10-18	5.0-15	---	7.4-9.0	1-5	0	0.0-4.0	0
	10-60	10-18	5.0-15	---	7.4-9.0	1-10	0	2.0-8.0	1-5
Linoyer-----	0-9	12-18	5.0-15	---	7.9-9.0	5-20	0	0.0-2.0	0
	9-60	12-18	5.0-15	---	7.9-9.0	10-30	0	0.0-2.0	0
0374: Heist-----	0-4	8-18	5.0-15	---	7.9-9.0	5-20	0	0.0-2.0	0-5
	4-40	8-18	5.0-15	---	7.9-9.0	5-20	0	2.0-4.0	5-13
	40-60	8-18	5.0-10	---	7.9-9.0	5-20	0	2.0-4.0	5-13
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0
Zerk-----	0-2	12-17	5.0-10	---	7.9-9.0	5-15	0	0.0-2.0	1-5
	2-16	12-17	5.0-10	---	7.9-9.0	10-20	0	0.0-2.0	5-12
	16-60	0-10	1.0-5.0	---	7.9-9.0	15-35	0	0.0-2.0	5-12
0375: Toano-----	0-9	8-15	5.0-15	---	7.9-9.0	10-20	0	0.0-2.0	0-2
	9-27	8-15	5.0-15	---	7.9-9.0	15-30	0-1	0.0-4.0	0-2
	27-60	8-15	5.0-15	---	7.9-9.0	15-30	0-1	8.0-16.0	1-12

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Heist-----	0-4 4-40 40-60	8-18 8-18 8-18	5.0-15 5.0-15 5.0-10	--- --- ---	7.9-9.0 7.9-9.0 7.9-9.0	5-20 5-20 5-20	0 0 0	0.0-2.0 2.0-4.0 2.0-4.0	0-5 5-13 5-13
0380: Cobre-----	0-7 7-15 15-34 34-38	15-25 15-25 8-18 ---	10-20 10-20 5.0-10 ---	--- --- --- ---	7.4-8.4 7.4-8.4 7.4-8.4 ---	0-5 0-5 0-5 ---	0 0 0 ---	0.0-2.0 0.0-2.0 0.0-2.0 ---	0 0 0 ---
Izar-----	0-3 3-12 12-16	18-25 18-25 ---	15-20 10-15 ---	--- --- ---	7.4-8.4 7.4-8.4 ---	1-10 5-30 ---	0 0 ---	0.0-2.0 0.0-2.0 ---	0 0 ---
Jackpot-----	0-4 4-11 11-15	5-10 5-10 ---	10-15 10-15 ---	--- --- ---	6.6-7.8 6.6-7.8 ---	0 0 ---	0 0 ---	0 0 ---	0 0 ---
0381: Cobre-----	0-7 7-15 15-34 34-38	15-25 15-25 8-18 ---	10-20 10-20 5.0-10 ---	--- --- --- ---	7.4-8.4 7.4-8.4 7.4-8.4 ---	0-5 0-5 0-5 ---	0 0 0 ---	0.0-2.0 0.0-2.0 0.0-2.0 ---	0 0 0 ---
Hundraw-----	0-5 5-10 10-14	8-18 8-18 ---	5.0-15 5.0-15 ---	--- --- ---	7.9-8.4 7.9-8.4 ---	5-10 5-15 ---	0 0 ---	0.0-2.0 0.0-2.0 ---	0 0 ---
Jackpot-----	0-4 4-11 11-15	5-10 5-10 ---	10-15 10-15 ---	--- --- ---	6.6-7.8 6.6-7.8 ---	0 0 ---	0 0 ---	0 0 ---	0 0 ---
0382: Cobre-----	0-7 7-15 15-34 34-38	15-25 15-25 8-18 ---	10-20 10-20 5.0-10 ---	--- --- --- ---	7.4-8.4 7.4-8.4 7.4-8.4 ---	0-5 0-5 0-5 ---	0 0 0 ---	0.0-2.0 0.0-2.0 0.0-2.0 ---	0 0 0 ---
Enko-----	0-2 2-14 14-32 32-60	10-18 10-18 10-18 10-18	10-25 10-25 10-25 10-25	--- --- --- ---	6.6-8.4 6.6-8.4 7.4-9.0 7.9-9.6	0 0 0-15 0-5	0 0 0 0	0.0-4.0 0.0-4.0 4.0-16.0 4.0-16.0	0-5 1-12 5-12 13-30
0390: Hardol-----	0-13 13-37 37-60	18-27 20-27 20-27	10-25 10-25 10-20	--- --- ---	7.4-8.4 7.4-8.4 7.9-8.4	1-10 10-20 15-25	0 0 0	0 0 0	0 0 0
Muiral-----	0-9 9-33 33-37	12-18 12-18 ---	15-30 15-25 ---	--- --- ---	5.6-6.5 6.1-7.3 ---	0 0-5 ---	0 0 ---	0 0 ---	0 0 ---
Rubble Land----	0-60	0-0	---	0.0-0.0	---	0	0	0	0
0392: Hardol-----	0-12 12-33 33-60	18-27 20-27 20-27	10-25 10-25 10-20	--- --- ---	7.4-8.4 7.4-8.4 7.9-8.4	1-10 10-20 15-25	0 0 0	0 0 0	0 0 0
Muiral-----	0-9 9-33 33-37	12-18 12-18 ---	15-30 15-25 ---	--- --- ---	5.6-6.5 6.1-7.3 ---	0 0-5 ---	0 0 ---	0 0 ---	0 0 ---
Onkeyo-----	0-8 8-17 17-21	18-27 25-35 ---	10-25 10-20 ---	--- --- ---	7.4-8.4 7.4-8.4 ---	1-10 15-25 ---	0 0 ---	0 0.0-2.0 ---	0 0 ---

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
0400:									
Cleavage-----	0-7	15-25	15-25	---	6.6-7.8	0	0	0	0
	7-15	20-35	15-30	---	6.6-7.8	0	0	0	0
	15-19	---	---	---	---	---	---	---	---
Cleavage-----	0-7	15-25	15-25	---	6.6-7.8	0	0	0	0
	7-15	20-35	15-30	---	6.6-7.8	0	0	0	0
	15-19	---	---	---	---	---	---	---	---
Sumine-----	0-9	10-20	20-30	---	6.6-7.8	0	0	0	0
	9-23	25-35	20-30	---	6.6-7.8	0	0	0	0
	23-27	---	---	---	---	---	---	---	---
410:									
Jericho-----	0-4	15-20	10-20	---	7.9-9.0	15-25	0	0.0-2.0	0-5
	4-14	10-18	10-15	---	7.9-9.0	20-30	0	0.0-2.0	0-5
	14-28	---	---	---	---	---	---	---	---
	28-60	2-4	1.0-5.0	---	7.9-9.0	15-30	0	0.0-2.0	0-5
411:									
Jericho-----	0-4	15-20	10-20	---	7.9-9.0	15-25	0	0.0-2.0	0-5
	4-14	10-18	10-15	---	7.9-9.0	20-30	0	0.0-2.0	0-5
	14-28	---	---	---	---	---	---	---	---
	28-60	2-4	1.0-5.0	---	7.9-9.0	15-30	0	0.0-2.0	0-5
Armespan-----	0-7	10-18	5.0-15	---	7.9-9.0	5-10	0	2.0-4.0	1-5
	7-21	12-18	5.0-15	---	7.9-9.0	5-10	0	8.0-16.0	1-5
	21-32	10-18	5.0-15	---	7.9-9.0	10-35	0	8.0-16.0	5-12
	32-60	5-10	1.0-10	---	7.9-9.0	10-35	0	2.0-4.0	5-12
0420:									
Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	0
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	0
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
0421:									
Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	0
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
Automal-----	0-8	15-25	15-25	---	7.9-9.0	15-20	0	0	0
	8-49	10-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	1-5
	49-60	5-15	5.0-10	---	7.9-9.0	15-30	0	8.0-16.0	13-30
0422:									
Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	0
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
Zimbob-----	0-2	10-18	5.0-10	---	7.9-9.0	50-70	0	0	1-5
	2-11	10-18	5.0-10	---	7.9-9.0	50-70	0	0	1-5
	11-15	---	---	---	---	---	---	---	---
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
0424: Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	0
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
Hundraw-----	0-5	8-18	5.0-15	---	7.9-8.4	5-10	0	0.0-2.0	0
	5-10	8-18	5.0-15	---	7.9-8.4	5-15	0	0.0-2.0	0
	10-14	---	---	---	---	---	---	---	---
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0
0426: Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	0
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
Automal-----	0-8	15-25	15-25	---	7.9-9.0	15-20	0	0	0
	8-49	10-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	1-5
	49-60	5-15	5.0-10	---	7.9-9.0	15-30	0	8.0-16.0	13-30
Wintermute-----	0-3	8-18	5.0-15	---	7.9-8.4	5-10	0	0	1-5
	3-15	8-18	5.0-15	---	7.9-9.0	5-15	0	0	1-5
	15-53	8-18	5.0-15	---	7.9-9.0	15-35	0	0	1-12
	53-60	27-35	10-20	---	7.9-9.0	15-35	0	0	1-12
0429: Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	0
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
Automal-----	0-8	15-25	15-25	---	7.9-9.0	15-20	0	0	0
	8-49	10-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	1-5
	49-60	5-15	5.0-10	---	7.9-9.0	15-30	0	8.0-16.0	13-30
Palinor-----	0-3	10-18	5.0-15	---	7.9-9.0	15-25	0	0	0
	3-14	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	14-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
0430: Graley-----	0-7	10-20	10-20	---	6.6-7.8	0	0	0	0
	7-19	35-45	20-35	---	6.6-7.8	0	0	0	0
	19-23	---	---	---	---	---	---	---	---
Pioche-----	0-2	8-12	10-20	---	6.6-7.8	0	0	0	0
	2-12	35-50	25-35	---	6.6-7.8	0	0	0	0
	12-16	---	---	---	---	---	---	---	---
Cropper-----	0-7	16-20	10-20	---	6.6-7.8	0	0	0	0
	7-14	27-35	20-30	---	6.6-7.8	0	0	0	0
	14-18	---	---	---	---	---	---	---	---
0431: Graley-----	0-7	10-20	10-20	---	6.6-7.8	0	0	0	0
	7-19	35-45	20-35	---	6.6-7.8	0	0	0	0
	19-23	---	---	---	---	---	---	---	---
Chen-----	0-3	20-27	15-25	---	6.1-7.8	0	0	0	0
	3-16	40-55	25-40	---	6.1-7.8	0	0	0	0
	16-20	---	---	---	---	---	---	---	---

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
McIvey-----	0-12	20-27	15-30	---	6.6-7.3	0	0	0	0
	12-18	30-40	20-30	---	6.1-7.3	0	0	0	0
	18-60	40-50	25-30	---	6.1-7.3	0	0	0	0
0440:									
Lemoine-----	0-9	8-15	5.0-15	---	7.4-8.4	1-5	0	0.0-2.0	0
	9-11	8-15	5.0-15	---	7.4-8.4	1-5	0	0.0-2.0	0
	11-15	---	---	---	---	---	---	---	---
Bijorja-----	0-4	8-18	5.0-15	---	7.4-7.8	0	0	0	0
	4-25	10-18	5.0-15	---	7.4-8.4	0-10	0	0.0-2.0	0
	25-29	---	---	---	---	---	---	---	---
Lemoine-----	0-9	8-15	5.0-15	---	7.4-8.4	1-5	0	0.0-2.0	0
	9-11	8-15	5.0-15	---	7.4-8.4	1-5	0	0.0-2.0	0
	11-15	---	---	---	---	---	---	---	---
0460:									
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0
Automal-----	0-8	15-25	15-25	---	7.9-9.0	15-20	0	0	0
	8-49	10-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	1-5
	49-60	5-15	5.0-10	---	7.9-9.0	15-30	0	8.0-16.0	13-30
Hundraw-----	0-5	8-18	5.0-15	---	7.9-8.4	5-10	0	0.0-2.0	0
	5-10	8-18	5.0-15	---	7.9-8.4	5-15	0	0.0-2.0	0
	10-14	---	---	---	---	---	---	---	---
0470:									
Rozara-----	0-2	4-8	5.0-10	---	7.4-7.8	0	0	0	0
	2-11	14-18	5.0-15	---	7.4-7.8	0	0	0	0
	11-15	---	---	---	---	---	---	---	---
Cucamungo-----	0-3	10-18	10-20	---	6.6-7.8	0	0	0	0
	3-14	20-30	15-25	---	6.6-8.4	0	0	0.0-2.0	0-1
	14-19	---	---	---	---	---	---	---	---
Rock Outcrop----	---	---	---	---	---	---	---	---	---
0471:									
Cucamungo-----	0-3	10-18	10-20	---	6.6-7.8	0	0	0	0
	3-14	20-30	15-25	---	6.6-8.4	0	0	0.0-2.0	0-1
	14-19	---	---	---	---	---	---	---	---
Hendap-----	0-7	6-12	5.0-10	---	7.4-7.8	1-5	0	0	0
	7-13	6-12	3.0-10	---	7.4-7.8	1-10	0	0	0
	13-17	---	---	---	---	---	---	---	---
Rock Outcrop----	---	---	---	---	---	---	---	---	---
0480:									
Shabliss-----	0-2	10-18	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	2-15	5-15	5.0-15	---	6.6-9.0	5-25	0	0.0-4.0	5-12
	15-31	---	---	---	---	---	---	---	---
	31-60	0-5	2.0-10	---	7.9-9.6	10-30	0	4.0-8.0	13-30
Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	1-5
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
0485: Shabliss-----	0-2	10-18	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	2-15	5-15	5.0-15	---	6.6-9.0	5-25	0	0.0-4.0	5-12
	15-31	---	---	---	---	---	---	---	---
	31-60	0-5	2.0-10	---	7.9-9.6	10-30	0	4.0-8.0	13-30
Parisa-----	0-5	8-18	5.0-15	---	7.9-9.0	1-5	0	0.0-2.0	1-5
	5-36	8-18	5.0-15	---	7.9-9.0	15-40	0	0.0-2.0	5-12
	36-55	---	---	---	---	---	---	---	---
	55-60	0-8	1.0-5.0	---	7.9-9.0	15-30	0	2.0-8.0	13-30
Hunnton-----	0-8	10-25	10-25	---	7.4-8.4	0	0	0.0-4.0	0-5
	8-12	20-30	15-25	---	7.9-8.4	0	0	0.0-4.0	0-5
	12-21	45-55	35-55	---	7.4-8.4	0-5	0	0.0-4.0	1-5
	21-40	---	---	---	---	---	---	---	---
0490: Wintermute-----	0-3	8-18	5.0-15	---	7.9-8.4	5-10	0	0	1-5
	3-15	8-18	5.0-15	---	7.9-9.0	5-15	0	0	1-5
	15-53	8-18	5.0-15	---	7.9-9.0	15-35	0	0	1-12
	53-60	27-35	10-20	---	7.9-9.0	15-35	0	0	1-12
Automal-----	0-8	15-25	15-25	---	7.9-9.0	15-20	0	0	0
	8-49	10-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	1-5
	49-60	5-15	5.0-10	---	7.9-9.0	15-30	0	8.0-16.0	13-30
0492: Wintermute-----	0-3	8-18	5.0-15	---	7.9-8.4	5-10	0	0	1-5
	3-15	8-18	5.0-15	---	7.9-9.0	5-15	0	0	1-5
	15-53	8-18	5.0-15	---	7.9-9.0	15-35	0	0	1-12
	53-60	27-35	10-20	---	7.9-9.0	15-35	0	0	1-12
Peeko-----	0-4	10-27	5.0-20	---	7.9-8.4	1-10	0	0.0-2.0	0
	4-10	18-27	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	10-30	---	---	---	---	---	---	---	---
Hundraw-----	0-5	8-18	5.0-15	---	7.9-8.4	5-10	0	0.0-2.0	0
	5-10	8-18	5.0-15	---	7.9-8.4	5-15	0	0.0-2.0	0
	10-14	---	---	---	---	---	---	---	---
0494: Wintermute-----	0-3	8-18	5.0-15	---	7.9-8.4	5-10	0	0	1-5
	3-15	8-18	5.0-15	---	7.9-9.0	5-15	0	0	1-5
	15-53	8-18	5.0-15	---	7.9-9.0	15-35	0	0	1-12
	53-60	27-35	10-20	---	7.9-9.0	15-35	0	0	1-12
Pyrat-----	0-6	12-20	5.0-15	---	7.9-8.4	1-10	0	2.0-4.0	0
	6-14	10-18	5.0-10	---	7.9-8.4	5-15	0	2.0-4.0	0
	14-21	10-18	5.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	21-42	10-18	1.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	42-60	5-10	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
Automal-----	0-8	10-20	15-25	---	7.9-9.0	15-20	0	0	0
	8-49	10-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	1-5
	49-60	5-15	5.0-10	---	7.9-9.0	15-30	0	8.0-16.0	13-30
0496: Sodhouse-----	0-8	10-18	5.0-10	---	7.9-9.0	0-5	0	0.0-2.0	1-5
	8-16	10-18	5.0-10	---	7.9-8.4	5-10	0	0.0-2.0	5-12
	16-60	---	---	---	---	---	---	---	---
Sodhouse-----	0-8	10-18	5.0-10	---	7.9-9.0	0-5	0	0.0-2.0	1-5
	8-16	10-18	5.0-10	---	7.9-8.4	5-10	0	0.0-2.0	5-12
	16-60	---	---	---	---	---	---	---	---
Linoyer-----	0-9	12-18	10-15	---	7.9-9.0	10-20	0	0.0-2.0	0
	9-60	12-18	10-15	---	7.9-9.0	10-40	0	0.0-2.0	0

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
0497:									
Sodhouse-----	0-8	10-18	5.0-10	---	7.9-9.0	0-5	0	0.0-2.0	1-5
	8-16	10-18	5.0-10	---	7.9-9.0	5-10	0	0.0-2.0	5-12
	16-60	---	---	---	---	---	---	---	---
Sodhouse-----	0-8	10-18	5.0-10	---	7.9-9.0	0-5	0	0.0-2.0	1-5
	8-16	10-18	5.0-10	---	7.9-9.0	5-10	0	0.0-2.0	5-12
	16-60	---	---	---	---	---	---	---	---
Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	1-5
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
0501:									
Pharo-----	0-13	15-20	15-25	---	7.4-8.4	5-15	0	0	0
	13-36	10-20	10-15	---	7.9-9.0	40-55	0	0	0
	36-60	2-8	5.0-10	---	7.9-9.0	30-40	0	0	0
Izar-----	0-3	18-25	15-20	---	7.4-8.4	1-10	0	0.0-2.0	0
	3-12	18-25	10-15	---	7.4-8.4	5-30	0	0.0-2.0	0
	12-16	---	---	---	---	---	---	---	---
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0
0503:									
Automal-----	0-8	15-25	15-25	---	7.9-9.0	15-20	0	0	0
	8-49	10-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	1-5
	49-60	5-15	5.0-10	---	7.9-9.0	15-30	0	8.0-16.0	13-30
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0
Wintermute----	0-3	8-18	5.0-15	---	7.9-8.4	5-10	0	0	1-5
	3-15	8-18	5.0-15	---	7.9-9.0	5-15	0	0	1-5
	15-53	8-18	5.0-15	---	7.9-9.0	15-35	0	0	1-12
	53-60	27-35	10-20	---	7.9-9.0	15-35	0	0	1-12
0504:									
Automal-----	0-8	15-25	15-25	---	7.9-9.0	15-20	0	0	0
	8-49	10-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	1-5
	49-60	5-15	5.0-10	---	7.9-9.0	15-30	0	8.0-16.0	13-30
Wintermute----	0-3	8-18	5.0-15	---	7.9-8.4	5-10	0	0	1-5
	3-15	8-18	5.0-15	---	7.9-9.0	5-15	0	0	1-5
	15-53	8-18	5.0-15	---	7.9-9.0	15-35	0	0	1-12
	53-60	27-35	10-20	---	7.9-9.0	15-35	0	0	1-12
0510:									
Adobe-----	0-7	18-27	12-20	---	7.9-8.4	5-15	0	0	0
	7-11	18-27	12-20	---	7.9-8.4	35-45	0	0	0
	11-15	---	---	---	---	---	---	---	---
Hardzem-----	0-5	10-20	5.0-15	---	7.4-7.8	0	0	0	0
	5-28	20-30	10-20	---	6.6-7.8	0	0	0	0
	28-55	---	---	---	---	---	---	---	---
Haunchee-----	0-4	10-20	10-25	---	7.4-8.4	10-20	0	0	0
	4-11	10-20	5.0-20	---	7.9-9.0	30-50	0	0.0-2.0	1-13
	11-15	---	---	---	---	---	---	---	---

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
0511: Adobe-----	0-7 7-11 11-15	18-27 18-27 ---	12-20 12-20 ---	--- --- ---	7.9-8.4 7.9-8.4 ---	5-15 35-45 ---	0 0 ---	0 0 ---	0 0 ---
Wardbay-----	0-14 14-55 55-59	18-27 18-27 ---	25-35 5.0-15 ---	--- --- ---	7.4-8.4 7.9-8.4 ---	40-60 40-60 ---	0 0 ---	0 0 ---	0 0 ---
Hardol-----	0-13 13-37 37-60	18-27 20-27 20-27	10-25 10-25 10-20	--- --- ---	7.4-8.4 7.4-8.4 7.9-8.4	1-10 10-20 15-25	0 0 0	0 0 0	0 0 0
0512: Adobe-----	0-7 7-11 11-15	18-27 18-27 ---	12-20 12-20 ---	--- --- ---	7.9-8.4 7.9-8.4 ---	5-15 35-45 ---	0 0 ---	0 0 ---	0 0 ---
Cavehill-----	0-12 12-30 30-34	18-27 18-27 ---	15-30 10-20 ---	--- --- ---	7.9-9.0 7.9-9.0 ---	10-20 30-50 ---	0 0 ---	0 0.0-2.0 ---	0 0 ---
Wardbay-----	0-14 14-55 55-59	18-27 18-27 ---	25-35 5.0-15 ---	--- --- ---	7.4-8.4 7.9-8.4 ---	40-60 40-60 ---	0 0 ---	0 0 ---	0 0 ---
0520: Haunchee-----	0-4 4-11 11-15	10-20 10-20 ---	10-25 5.0-20 ---	--- --- ---	7.4-8.4 7.9-9.0 ---	10-20 30-50 ---	0 0 ---	0 0.0-2.0 ---	0 1-13 ---
Muiral-----	0-9 9-33 33-37	12-18 12-18 ---	15-30 15-25 ---	--- --- ---	5.6-6.5 6.1-7.3 ---	0 0-5 ---	0 0 ---	0 0 ---	0 0 ---
Wardbay-----	0-14 14-55 55-59	18-27 18-27 ---	25-35 5.0-15 ---	--- --- ---	7.4-8.4 7.9-8.4 ---	40-60 40-60 ---	0 0 ---	0 0 ---	0 0 ---
0530: Wardbay-----	0-14 14-55 55-59	18-27 18-27 ---	25-35 5.0-15 ---	--- --- ---	7.4-8.4 7.9-8.4 ---	40-60 40-60 ---	0 0 ---	0 0 ---	0 0 ---
Adobe-----	0-7 7-11 11-15	18-27 18-27 ---	12-20 12-20 ---	--- --- ---	7.9-8.4 7.9-8.4 ---	5-15 35-45 ---	0 0 ---	0 0 ---	0 0 ---
Haunchee-----	0-4 4-11 11-15	10-20 10-20 ---	10-25 5.0-20 ---	--- --- ---	7.4-8.4 7.9-9.0 ---	10-20 30-50 ---	0 0 ---	0 0.0-2.0 ---	0 1-13 ---
0532: Onkeyo-----	0-8 8-17 17-21	18-27 25-35 ---	10-25 10-20 ---	--- --- ---	7.4-8.4 7.4-8.4 ---	1-10 15-25 ---	0 0 ---	0 0.0-2.0 ---	0 0 ---
Pookaloo-----	0-2 2-14 14-18	10-18 10-18 ---	10-20 10-20 ---	--- --- ---	7.9-8.4 7.9-8.4 ---	20-30 30-50 ---	0 0 ---	0 0 ---	0 0 ---
Tecomar-----	0-2 2-14 14-18	18-27 20-27 ---	10-20 5.0-15 ---	--- --- ---	7.9-9.0 7.9-9.0 ---	10-30 20-40 ---	0 0 ---	0.0-2.0 0.0-2.0 ---	0 1-5 ---

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
0540:									
Kunzler-----	0-16	12-20	7.0-15	---	7.9-9.0	1-5	0	0.0-2.0	0-13
	16-48	10-18	4.0-12	---	7.9-9.6	15-20	0	4.0-16.0	13-30
	48-60	10-18	4.0-12	---	7.9-9.6	5-15	0	4.0-16.0	30-60
Sycomat-----	0-5	5-15	2.0-10	---	7.9-8.4	15-30	0	2.0-4.0	0-5
	5-11	5-18	2.0-10	---	7.9-9.6	10-30	0	2.0-4.0	0-5
	11-48	5-18	2.0-10	---	7.9-9.6	10-30	0	2.0-4.0	0-5
	48-60	2-5	0.0-2.0	---	8.5-9.0	10-30	0	2.0-4.0	0-5
0541:									
Kunzler-----	0-16	12-20	7.0-15	---	7.9-9.0	1-5	0	0.0-2.0	0-13
	16-48	10-18	4.0-12	---	7.9-9.0	15-20	0	4.0-16.0	13-30
	48-60	10-18	4.0-12	---	7.9-9.0	5-15	0	4.0-16.0	30-60
Sheffit-----	0-4	17-27	10-20	---	8.5-9.6	15-20	0	4.0-8.0	5-12
	4-60	35-50	20-30	---	8.5-9.6	20-35	1-5	8.0-16.0	13-45
0550:									
Urmafot-----	0-7	18-27	15-25	---	7.9-8.4	10-30	0	0	0
	7-16	18-27	10-20	---	7.9-8.4	20-40	0	0	0
	16-29	---	---	---	---	---	---	---	---
	29-60	5-15	5.0-15	---	7.9-8.4	20-40	0	0.0-2.0	0
Bobs-----	0-8	10-20	10-20	---	7.9-9.0	20-30	0	0	0
	8-13	10-20	8.0-18	---	7.9-9.0	35-45	0	0.0-2.0	1-5
	13-17	---	---	---	---	---	---	---	---
Urmafot-----	0-5	18-27	15-25	---	7.9-8.4	10-30	0	0	0
	5-9	18-27	10-20	---	7.9-8.4	20-40	0	0	0
	9-29	---	---	---	---	---	---	---	---
	29-60	5-15	5.0-15	---	7.9-8.4	20-40	0	0.0-2.0	0
0551:									
Urmafot-----	0-7	18-27	15-25	---	7.9-8.4	10-30	0	0	0
	7-16	18-27	10-20	---	7.9-8.4	20-40	0	0	0
	16-29	---	---	---	---	---	---	---	---
	29-60	5-15	5.0-15	---	7.9-8.4	20-40	0	0.0-2.0	0
Bobs-----	0-8	10-20	10-20	---	7.9-9.0	20-30	0	0	0
	8-13	10-20	8.0-18	---	7.9-9.0	35-45	0	0.0-2.0	1-5
	13-17	---	---	---	---	---	---	---	---
552:									
Urmafot-----	0-7	18-27	15-25	---	7.9-8.4	10-30	0	0	0
	7-16	18-27	10-20	---	7.9-8.4	20-40	0	0	0
	16-29	---	---	---	---	---	---	---	---
	29-60	5-15	5.0-15	---	7.9-8.4	20-40	0	0.0-2.0	0
Pharo-----	0-13	15-20	15-25	---	7.4-8.4	5-15	0	0	0
	13-36	10-20	10-15	---	7.9-9.0	40-55	0	0	0
	36-60	2-8	5.0-10	---	7.9-9.0	30-40	0	0	0
0554:									
Urmafot-----	0-7	18-27	15-25	---	7.9-8.4	10-30	0	0	0
	7-16	18-27	10-20	---	7.9-8.4	20-40	0	0	0
	16-29	---	---	---	---	---	---	---	---
	29-60	5-15	5.0-15	---	7.9-8.4	20-40	0	0.0-2.0	0
Tecomar-----	0-2	18-27	10-20	---	7.9-9.0	10-30	0	0.0-2.0	0
	2-14	20-27	5.0-15	---	7.9-9.0	20-40	0	0.0-2.0	1-5
	14-18	---	---	---	---	---	---	---	---
Urmafot-----	0-7	18-27	15-25	---	7.9-8.4	10-30	0	0	0
	7-9	18-27	10-20	---	7.9-8.4	20-40	0	0	0
	9-29	---	---	---	---	---	---	---	---
	29-60	5-15	5.0-15	---	7.9-8.4	20-40	0	0.0-2.0	0

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
0561: Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	1-5
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
Urmafot-----	0-7	18-27	15-25	---	7.9-8.4	10-30	0	0	0
	7-16	18-27	10-20	---	7.9-8.4	20-40	0	0	0
	16-29	---	---	---	---	---	---	---	---
	29-60	5-15	5.0-15	---	7.9-8.4	20-40	0	0.0-2.0	0
Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	1-5
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
0562: Bobs-----	0-8	10-20	10-20	---	7.9-9.0	25-35	0	0	0
	8-13	10-20	8.0-18	---	7.9-9.0	35-45	0	0.0-2.0	1-5
	13-17	---	---	---	---	---	---	---	---
0563: Bobs-----	0-8	10-20	10-20	---	7.9-9.0	20-30	0	0	0
	8-13	10-20	8.0-18	---	7.9-9.0	35-45	0	0.0-2.0	1-5
	13-17	---	---	---	---	---	---	---	---
Pyrat-----	0-6	10-18	5.0-15	---	7.9-9.0	1-10	0	0.0-2.0	0
	6-14	10-18	5.0-10	---	7.9-8.4	5-15	0	2.0-4.0	0
	14-21	10-18	5.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	21-42	10-18	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
	42-60	5-10	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
0575: Pookaloo-----	0-2	10-18	10-20	---	7.9-8.4	20-30	0	0	0
	2-14	10-18	10-20	---	7.9-8.4	30-50	0	0	0
	14-18	---	---	---	---	---	---	---	---
Cavehill-----	0-12	18-27	15-30	---	7.9-9.0	10-20	0	0	0
	12-30	18-27	10-20	---	7.9-9.0	30-50	0	0.0-2.0	0
	30-34	---	---	---	---	---	---	---	---
Rock Outcrop----	---	---	---	---	---	---	---	---	---
0576: Pookaloo-----	0-2	10-18	10-20	---	7.9-8.4	20-30	0	0	0
	2-14	10-18	10-20	---	7.9-8.4	30-50	0	0	0
	14-18	---	---	---	---	---	---	---	---
Tecomax-----	0-2	18-27	10-20	---	7.9-9.0	10-30	0	0.0-2.0	0
	2-14	20-27	5.0-15	---	7.9-9.0	20-40	0	0.0-2.0	1-5
	14-18	---	---	---	---	---	---	---	---
Onkeyo-----	0-8	18-27	10-25	---	7.4-8.4	1-10	0	0	0
	8-17	25-35	10-20	---	7.4-8.4	15-25	0	0.0-2.0	0
	17-21	---	---	---	---	---	---	---	---
0582: Sheffit-----	0-10	10-18	5.0-10	---	8.5-9.6	10-15	0	2.0-4.0	1-5
	10-60	35-50	20-30	---	8.5-9.6	20-35	1-5	8.0-16.0	13-45
Sheffit-----	0-4	10-18	5.0-10	---	8.5-9.6	10-15	0	4.0-8.0	5-12
	4-60	35-50	20-30	---	8.5-9.6	20-35	1-5	8.0-16.0	13-45

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Katelana-----	0-5	14-24	10-25	---	8.5-9.0	20-40	0	4.0-8.0	2-12
	5-28	18-25	10-20	---	8.5-9.0	40-50	0	4.0-8.0	2-12
	28-32	18-25	10-20	---	8.5-9.0	40-60	0	16.0-32.0	46-90
	32-62	27-40	15-35	---	8.5-9.0	40-60	1-2	16.0-32.0	90-180
0590: Upatad-----	0-1	18-27	15-25	---	7.4-7.8	0	0	0	0
	1-14	27-35	25-35	---	7.4-8.4	1-10	0	0	0
	14-18	---	---	---	---	---	---	---	---
Segura-----	0-2	15-20	10-15	---	6.6-8.4	0	0	0	0
	2-11	20-35	15-25	---	6.6-8.4	0	0	0	0
	11-15	---	---	---	---	---	---	---	---
0600: Onkeyo-----	0-8	18-27	10-25	---	7.4-8.4	1-10	0	0	0
	8-17	25-35	10-20	---	7.4-8.4	15-25	0	0.0-2.0	0
	17-21	---	---	---	---	---	---	---	---
Amene-----	0-12	20-27	10-25	---	7.4-9.0	10-20	0	0.0-2.0	0
	12-18	18-27	10-20	---	7.9-9.0	35-45	0	0.0-2.0	0
	18-22	---	---	---	---	---	---	---	---
Pookaloo-----	0-2	10-18	10-20	---	7.9-8.4	20-30	0	0	0
	2-14	10-18	10-20	---	7.9-8.4	30-50	0	0	0
	14-18	---	---	---	---	---	---	---	---
0610: Wintermute-----	0-3	8-18	5.0-15	---	7.9-8.4	5-10	0	0	1-5
	3-15	8-18	5.0-15	---	7.9-9.0	5-15	0	0	1-5
	15-53	8-18	5.0-15	---	7.9-9.0	15-35	0	0	1-12
	53-60	27-35	10-20	---	7.9-9.0	15-35	0	0	1-12
Eastwell-----	0-5	10-18	5.0-15	---	8.5-9.0	0-5	0	0	1-5
	5-18	10-27	5.0-20	---	8.5-9.0	5-10	0	0.0-2.0	13-30
	18-27	---	---	---	---	---	---	---	---
	27-60	10-20	5.0-15	---	8.5-9.6	15-30	0	0.0-2.0	13-30
0614: Wintermute-----	0-3	12-18	8.0-15	---	7.9-8.4	1-10	0	0	1-5
	3-15	8-18	5.0-15	---	7.9-9.0	5-15	0	0	1-5
	15-53	8-18	5.0-15	---	7.9-9.0	15-35	0	0	1-12
	53-60	27-35	10-20	---	7.9-9.0	15-35	0	0	1-12
Eastwell-----	0-5	10-18	5.0-15	---	8.5-9.0	0-5	0	0	1-5
	5-18	10-27	5.0-20	---	8.5-9.0	5-10	0	0.0-2.0	13-30
	18-27	---	---	---	---	---	---	---	---
	27-60	10-20	5.0-15	---	8.5-9.6	15-30	0	0.0-2.0	13-30
Zerk-----	0-2	12-17	5.0-10	---	7.9-9.0	5-15	0	0.0-2.0	1-5
	2-16	12-17	5.0-10	---	7.9-9.0	10-20	0	0.0-2.0	5-12
	16-60	0-10	1.0-5.0	---	7.9-9.0	15-35	0	0.0-2.0	5-12
0617: Wintermute-----	0-3	8-18	5.0-15	---	7.9-8.4	5-10	0	0	1-5
	3-15	8-18	5.0-15	---	7.9-9.0	5-15	0	0	1-5
	15-53	8-18	5.0-15	---	7.9-9.0	15-35	0	0	1-12
	53-60	27-35	10-20	---	7.9-9.0	15-35	0	0	1-12
Zerk-----	0-2	12-17	5.0-10	---	7.9-9.0	5-15	0	0.0-2.0	1-5
	2-16	12-17	5.0-10	---	7.9-9.0	10-20	0	0.0-2.0	5-12
	16-60	0-10	1.0-5.0	---	7.9-9.0	15-35	0	0.0-2.0	5-12
Loray-----	0-12	10-20	5.0-15	---	7.9-9.0	5-15	0	0.0-2.0	1-5
	12-60	0-8	1.0-8.0	---	7.9-9.0	5-20	0	0.0-4.0	5-12

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
0620: Atlow-----	0-5 5-18 18-22	15-25 27-35 ---	10-25 15-30 ---	--- --- ---	7.4-8.4 7.9-9.0 ---	0 0-5 ---	0 0 ---	0 0.0-2.0 ---	0 0 ---
Atlow-----	0-5 5-18 18-22	15-25 27-35 ---	10-25 15-30 ---	--- --- ---	7.4-8.4 7.9-9.0 ---	0 0-5 ---	0 0 ---	0 0.0-2.0 ---	0 0 ---
0631: Eastwell-----	0-5 5-18 18-27 27-60	10-18 10-27 --- 10-20	5.0-15 5.0-20 --- 5.0-15	--- --- --- ---	8.5-9.0 8.5-9.0 --- 8.5-9.6	0-5 5-10 --- 15-30	0 0 --- 0	0 0.0-2.0 --- 0.0-2.0	1-5 13-30 --- 13-30
Wintermute-----	0-3 3-15 15-53 53-60	8-18 8-18 8-18 27-35	5.0-15 5.0-15 5.0-15 10-20	--- --- --- ---	7.9-8.4 7.9-9.0 7.9-9.0 7.9-9.0	5-10 5-15 15-35 15-35	0 0 0 0	0 0 0 0	1-5 1-5 1-12 1-12
Okan-----	0-8 8-38 38-60	8-18 8-18 4-8	5.0-15 5.0-10 1.0-5.0	--- --- ---	7.9-8.4 7.9-8.4 8.5-9.0	1-5 5-15 5-15	0 0 0	0 0 0	0 0 0
0632: Eastwell-----	0-5 5-18 18-27 27-60	10-18 10-27 --- 10-20	5.0-15 5.0-20 --- 5.0-15	--- --- --- ---	8.5-9.0 8.5-9.0 --- 8.5-9.6	0-5 5-10 --- 15-30	0 0 --- 0	0 0.0-2.0 --- 0.0-2.0	1-5 13-30 --- 13-30
Zafod-----	0-7 7-28 28-38 38-60	5-15 5-15 --- 2-8	1.0-10 1.0-5.0 --- 0.0-5.0	--- --- --- ---	7.9-8.4 8.5-9.0 --- 7.9-9.0	1-5 5-10 --- 5-10	0 0 --- 0	0 0 --- 0	0 1-5 --- 1-5
0634: Eastwell-----	0-5 5-18 18-27 27-60	10-18 10-27 --- 10-20	5.0-15 5.0-20 --- 5.0-15	--- --- --- ---	8.5-9.0 8.5-9.0 --- 8.5-9.6	0-5 5-10 --- 15-30	0 0 --- 0	0 0.0-2.0 --- 0.0-2.0	1-5 13-30 --- 13-30
Shabliss-----	0-2 2-15 15-31 31-60	10-18 5-15 --- 0-5	10-20 5.0-15 --- 2.0-10	--- --- --- ---	7.9-8.4 6.6-9.0 --- 7.9-9.6	1-10 5-25 --- 10-30	0 0 --- 0	0.0-2.0 0.0-4.0 --- 4.0-8.0	1-5 5-12 --- 13-30
Izar-----	0-3 3-12 12-16	18-25 18-25 ---	15-20 10-15 ---	--- --- ---	7.4-8.4 7.4-8.4 ---	1-10 5-30 ---	0 0 ---	0.0-2.0 0.0-2.0 ---	0 0 ---
0636: Eastwell-----	0-5 5-18 18-27 27-60	10-15 10-27 --- 10-20	5.0-15 5.0-20 --- 5.0-15	--- --- --- ---	8.5-9.0 8.5-9.0 --- 8.5-9.6	0-5 5-10 --- 15-30	0 0 --- 0	0 0.0-2.0 --- 0.0-2.0	1-5 13-30 --- 13-30
Hundraw-----	0-5 5-10 10-14	8-18 8-18 ---	5.0-15 5.0-15 ---	--- --- ---	7.9-8.4 7.9-8.4 ---	5-10 5-15 ---	0 0 ---	0.0-2.0 0.0-2.0 ---	0 0 ---
Okan-----	0-8 8-38 38-60	8-18 8-18 4-8	5.0-15 5.0-10 1.0-5.0	--- --- ---	7.9-8.4 7.9-8.4 8.5-9.0	1-5 5-15 5-15	0 0 0	0 0 0	0 0 0

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

[illegible]

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Upatad-----	0-2	18-27	15-25	---	7.4-7.8	0	0	0	0
	2-14	27-35	25-35	---	7.4-8.4	1-10	0	0	0
	14-18	---	---	---	---	---	---	---	---
Wesfil-----	0-6	12-18	10-15	---	7.4-9.0	1-10	0	0.0-2.0	1-5
	6-10	---	---	---	---	---	---	---	---
0700: Shabliss-----	0-2	10-18	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	2-15	5-15	5.0-15	---	6.6-9.0	5-25	0	0.0-4.0	5-12
	15-31	---	---	---	---	---	---	---	---
	31-60	0-5	2.0-10	---	7.9-9.6	10-30	0	4.0-8.0	13-30
Tulase-----	0-2	8-18	10-15	---	7.9-8.4	5-10	0	0.0-2.0	0
	2-60	8-18	5.0-15	---	7.9-9.0	10-15	0	0.0-2.0	1-5
Linoyer-----	0-9	12-18	5.0-15	---	7.9-9.0	5-20	0	0.0-2.0	0
	9-60	12-18	5.0-15	---	7.9-9.0	10-30	0	0.0-2.0	0
0720: Mysol-----	0-5	27-35	20-25	---	8.5-9.6	5-10	0-1	0.0-4.0	1-12
	5-17	20-35	10-20	---	8.5-9.0	1-5	0-1	0.0-4.0	1-12
	17-31	20-35	10-20	---	7.9-9.0	5-15	0-1	8.0-16.0	13-30
	31-60	2-8	0.0-5.0	---	7.9-8.4	5-15	0-1	4.0-16.0	13-30
Mysol-----	0-5	27-35	20-25	---	8.5-9.6	5-10	0-1	0.0-4.0	1-12
	5-17	20-35	10-20	---	8.5-9.0	1-5	0-1	0.0-4.0	1-12
	17-31	20-35	10-20	---	7.9-9.0	5-15	0-1	8.0-16.0	13-30
	31-60	2-8	0.0-5.0	---	7.9-8.4	5-15	0-1	4.0-16.0	13-30
0730: Idway-----	0-4	4-10	1.0-10	---	7.9-9.0	1-10	0	0.0-2.0	1-5
	4-12	8-18	5.0-10	---	7.9-9.0	1-10	0	0.0-2.0	1-5
	12-27	8-18	5.0-15	---	8.5-9.6	5-15	0	0.0-2.0	1-5
	27-60	2-8	1.0-5.0	---	8.5-9.6	1-10	0	0.0-2.0	1-5
Kawich-----	0-2	0-5	1.0-5.0	---	8.5-9.6	1-5	1-5	4.0-8.0	1-5
	2-60	0-5	1.0-5.0	---	8.5-9.6	1-10	1-5	4.0-8.0	1-5
Mysol-----	0-5	20-27	15-20	---	8.5-9.6	5-10	0-1	0.0-4.0	1-12
	5-17	20-35	10-20	---	8.5-9.0	1-5	0-1	0.0-4.0	1-12
	17-31	20-35	10-20	---	7.9-9.0	5-15	0-1	8.0-16.0	13-30
	31-60	2-8	0.0-5.0	---	7.9-8.4	5-15	0-1	4.0-16.0	13-30
0733: Idway-----	0-4	4-10	1.0-10	---	7.9-9.0	1-10	0	0.0-2.0	1-5
	4-12	8-18	5.0-10	---	7.9-9.0	1-10	0	0.0-2.0	1-5
	12-27	8-18	5.0-15	---	8.5-9.6	5-15	0	0.0-2.0	1-5
	27-60	2-8	1.0-5.0	---	8.5-9.6	1-10	0	0.0-2.0	1-5
Idway-----	0-4	8-18	5.0-10	---	7.9-9.0	1-10	0	0.0-2.0	1-5
	4-12	8-18	5.0-10	---	7.9-9.0	1-10	0	0.0-2.0	1-5
	12-27	8-18	5.0-15	---	8.5-9.6	5-15	0	0.0-2.0	1-5
	27-60	2-8	1.0-5.0	---	8.5-9.6	1-10	0	0.0-2.0	1-5
Mysol-----	0-5	27-35	20-25	---	8.5-9.6	5-10	0-1	0.0-4.0	1-12
	5-17	20-35	10-20	---	8.5-9.0	1-5	0-1	0.0-4.0	1-12
	17-31	20-35	10-20	---	7.9-9.0	5-15	0-1	8.0-16.0	13-30
	31-60	2-8	0.0-5.0	---	7.9-8.4	5-15	0-1	4.0-16.0	13-30
0740: Upatad-----	0-1	18-27	15-25	---	7.4-7.8	0	0	0	0
	1-14	27-35	25-35	---	7.4-8.4	1-10	0	0	0
	14-18	---	---	---	---	---	---	---	---

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Pioche-----	0-2	5-15	10-20	---	6.6-7.8	0	0	0	0
	2-12	35-50	25-35	---	6.6-7.8	0	0	0	0
	12-16	---	---	---	---	---	---	---	---
Tarnach-----	0-3	18-27	15-25	---	7.9-9.0	5-10	0	0.0-2.0	0
	3-12	18-27	15-25	---	7.9-9.0	15-25	0	0.0-2.0	0
	12-16	---	---	---	---	---	---	---	---
0760: Playas-----	0-6	27-40	20-40	---	8.5-9.0	1-10	1-10	4.0-16.0	13-45
	6-60	35-70	20-40	---	8.5-9.0	1-10	1-10	4.0-16.0	13-45
0761: Umberland-----	0-5	40-50	25-30	---	9.1-9.6	10-25	0	16.0-32.0	46-90
	5-60	35-50	20-30	---	8.5-9.6	10-25	1-5	4.0-16.0	31-90
Umberland-----	0-15	40-45	25-29	---	9.1-9.6	10-25	0	16.0-32.0	46-90
	15-60	35-50	22-32	---	8.5-9.6	10-25	1-5	4.0-16.0	46-90
0762: Umberland-----	0-5	40-50	25-30	---	9.1-9.6	10-25	0	16.0-32.0	46-90
	5-60	35-50	20-30	---	8.5-9.6	10-25	1-5	4.0-16.0	31-90
Playas-----	0-6	27-40	20-40	---	8.5-9.0	1-10	1-10	4.0-16.0	13-45
	6-60	35-70	20-40	---	8.5-9.0	1-10	1-10	4.0-16.0	13-45
0763: Equis-----	0-6	40-50	20-25	---	8.5-9.6	35-45	0	8.0-16.0	20-70
	6-24	40-50	15-25	---	8.5-9.6	45-65	1-2	8.0-16.0	5-70
	24-41	30-45	10-20	---	8.5-9.6	45-65	1-2	4.0-8.0	1-5
	41-60	20-45	10-20	---	8.5-9.0	40-60	1-2	0.0-4.0	1-5
Umberland-----	0-15	40-45	25-29	---	9.1-9.6	10-25	0	16.0-32.0	46-90
	15-60	35-50	22-32	---	8.5-9.6	10-25	1-5	4.0-16.0	46-90
Duffer-----	0-25	27-35	15-30	---	7.9-9.6	20-40	1-2	8.0-16.0	31-45
	25-60	20-35	10-20	---	7.9-9.6	40-60	1-2	16.0-32.0	46-90
0764: Umberland-----	0-15	35-40	22-26	---	9.1-9.6	10-25	0	16.0-32.0	46-90
	15-60	35-50	22-32	---	8.5-9.6	10-25	1-5	4.0-16.0	46-90
Rubylake-----	0-7	27-35	15-30	---	8.5-9.0	30-40	0	4.0-8.0	5-12
	7-23	18-27	15-20	---	8.5-9.6	40-50	0	2.0-8.0	1-5
	23-55	18-27	15-20	---	8.5-9.6	40-50	0-1	2.0-8.0	1-5
	55-60	25-35	15-25	---	8.5-9.6	50-70	1-2	2.0-4.0	1-5
Orupa-----	0-6	35-40	25-40	---	7.9-9.0	15-30	0	0.0-4.0	5-12
	6-60	35-45	20-35	---	7.9-9.0	20-30	1-2	0.0-8.0	5-12
0765: Umberland-----	0-5	40-50	25-30	---	9.1-9.6	10-25	0	16.0-32.0	46-90
	5-60	35-50	20-30	---	8.5-9.6	10-25	1-5	4.0-16.0	31-90
Umberland-----	0-15	40-45	25-29	---	9.1-9.6	10-25	0	16.0-32.0	46-90
	15-60	35-50	22-32	---	8.5-9.6	10-25	1-5	4.0-16.0	46-90
Wendane-----	0-8	15-25	15-25	---	8.5-9.6	5-15	0	16.0-32.0	46-99
	8-42	15-25	15-25	---	7.9-9.6	5-15	0	16.0-32.0	1-12
	42-60	27-35	25-40	---	7.9-9.6	5-15	0	16.0-32.0	1-5
0767: Umberland-----	0-15	40-45	25-29	---	9.1-9.6	10-25	0	16.0-32.0	46-90
	15-60	35-50	22-32	---	8.5-9.6	10-25	1-5	4.0-16.0	46-90
Umberland-----	0-5	40-50	25-30	---	9.1-9.6	10-25	0	16.0-32.0	46-90
	5-60	35-50	20-30	---	8.5-9.6	10-25	1-5	4.0-16.0	31-90

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Orupa-----	0-6	40-55	30-50	---	7.9-9.0	15-30	0	0.0-4.0	5-12
	6-60	35-45	20-35	---	7.9-9.0	20-30	1-2	0.0-8.0	5-12
0781: Mysol-----	0-5	27-35	20-25	---	8.5-9.6	5-10	0-1	0.0-4.0	1-12
	5-17	20-35	10-20	---	8.5-9.0	1-5	0-1	0.0-4.0	1-12
	17-31	20-35	10-20	---	7.9-9.0	5-15	0-1	8.0-16.0	13-30
	31-60	2-8	0.0-5.0	---	7.9-8.4	5-15	0-1	4.0-16.0	13-30
Benin-----	0-7	15-25	10-15	---	7.9-9.0	1-5	0	8.0-16.0	0-13
	7-60	40-50	25-30	---	7.9-9.6	1-10	1-5	4.0-16.0	13-50
Wendane-----	0-8	27-35	25-35	---	7.9-9.0	5-15	0	16.0-32.0	46-99
	8-42	15-25	15-25	---	7.9-9.6	5-15	0	16.0-32.0	1-12
	42-60	27-35	25-40	---	7.9-9.6	5-15	0	16.0-32.0	1-5
0800: Mazuma-----	0-15	10-14	5.0-10	---	7.9-9.6	1-5	0	0.0-4.0	5-12
	15-60	5-15	2.0-10	---	7.9-9.6	1-10	1-2	4.0-16.0	13-45
Toano-----	0-9	8-15	5.0-15	---	7.9-9.0	10-20	0	0.0-2.0	0-2
	9-27	8-15	5.0-15	---	7.9-9.0	15-30	0-1	0.0-4.0	0-2
	27-60	8-15	5.0-15	---	7.9-9.0	15-30	0-1	8.0-16.0	1-12
0801: Mazuma-----	0-15	10-14	5.0-10	---	7.9-9.6	1-5	0	0.0-4.0	5-12
	15-60	5-15	2.0-10	---	7.9-9.6	1-10	1-2	4.0-16.0	13-45
Zerk-----	0-2	12-17	5.0-10	---	7.9-9.0	5-15	0	0.0-2.0	1-5
	2-16	12-17	5.0-10	---	7.9-9.0	10-20	0	0.0-2.0	5-12
	16-60	0-10	1.0-5.0	---	7.9-9.0	15-35	0	0.0-2.0	5-12
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0
0804: Mazuma-----	0-15	10-14	5.0-10	---	7.9-9.6	1-5	0	0.0-4.0	5-12
	15-60	5-15	2.0-10	---	7.9-9.6	1-10	1-2	4.0-16.0	13-45
Kawich-----	0-2	0-5	1.0-5.0	---	8.5-9.6	1-5	1-5	4.0-8.0	1-5
	2-60	0-5	1.0-5.0	---	8.5-9.6	1-10	1-5	4.0-8.0	1-5
Playas-----	0-6	27-40	20-40	---	8.5-9.0	1-10	1-10	4.0-16.0	13-45
	6-60	35-70	20-40	---	8.5-9.0	1-10	1-10	4.0-16.0	13-45
0807: Mazuma-----	0-15	10-14	5.0-10	---	7.9-9.6	1-5	0	0.0-4.0	5-12
	15-60	5-15	2.0-10	---	7.9-9.6	1-10	1-2	4.0-16.0	13-45
Kunzler-----	0-5	12-20	7.0-15	---	7.9-9.0	1-5	0	0.0-2.0	0-13
	5-48	10-18	4.0-12	---	7.9-9.0	15-20	0	4.0-16.0	13-30
	48-60	10-18	4.0-12	---	7.9-9.0	5-15	0	4.0-16.0	30-60
Zerk-----	0-2	12-17	5.0-10	---	7.9-9.0	5-15	0	0.0-2.0	1-5
	2-16	12-17	5.0-10	---	7.9-9.0	10-20	0	0.0-2.0	5-12
	16-60	0-10	1.0-5.0	---	7.9-9.0	15-35	0	0.0-2.0	5-12
0823: Kunzler-----	0-16	12-20	7.0-15	---	7.9-9.0	1-5	0	0.0-2.0	0-13
	16-48	10-18	4.0-12	---	7.9-9.0	15-20	0	4.0-16.0	13-30
	48-60	10-18	4.0-12	---	7.9-9.0	5-15	0	4.0-16.0	30-60

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Pyrat-----	0-6	12-20	5.0-15	---	7.9-8.4	1-10	0	2.0-4.0	0
	6-14	10-18	5.0-10	---	7.9-8.4	5-15	0	2.0-4.0	0
	14-21	10-18	5.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	21-42	10-18	1.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	42-60	5-10	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
Blimo-----	0-8	12-18	10-20	---	7.9-8.4	5-15	0	0	0
	8-21	12-18	10-15	---	7.9-8.4	5-15	0	2.0-4.0	1-5
	21-36	12-18	10-15	---	7.9-9.0	5-15	0	2.0-4.0	5-12
	36-60	12-18	10-15	---	7.9-9.0	5-15	1-5	2.0-4.0	5-12
0824: Kunzler-----	0-16	12-20	7.0-15	---	7.9-9.0	1-5	0	0.0-2.0	0-13
	16-48	10-18	4.0-12	---	7.9-9.0	15-20	0	4.0-16.0	13-30
	48-60	10-18	4.0-12	---	7.9-9.0	5-15	0	4.0-16.0	30-60
Katelana-----	0-5	14-24	10-25	---	8.5-9.0	20-40	0	4.0-8.0	2-12
	5-28	18-25	10-20	---	8.5-9.0	40-50	0	4.0-8.0	2-12
	28-32	18-25	10-20	---	8.5-9.0	40-60	0	16.0-32.0	46-90
	32-60	27-40	15-35	---	8.5-9.0	40-60	1-2	16.0-32.0	90-180
0827: Kunzler-----	0-16	12-20	7.0-15	---	7.9-9.0	1-5	0	0.0-2.0	0-13
	16-48	10-18	4.0-12	---	7.9-9.0	15-20	0	4.0-16.0	13-30
	48-60	10-18	4.0-12	---	7.9-9.0	5-15	0	4.0-16.0	30-60
James Canyon----	0-8	10-15	10-20	---	6.1-8.4	0	0	0.0-2.0	0
	8-33	18-27	20-30	---	6.1-8.4	0	0	0.0-2.0	0
	33-60	10-15	10-15	---	6.1-8.4	0	0	0.0-2.0	0
James Canyon----	0-31	15-25	15-25	---	6.1-7.3	0	0	0	0
	31-60	20-27	15-25	---	6.1-7.3	0	0	0	0
0828: Kunzler-----	0-16	12-20	7.0-15	---	7.9-9.0	1-5	0	0.0-2.0	0-13
	16-48	10-18	4.0-12	---	7.9-9.0	15-20	0	4.0-16.0	13-30
	48-60	10-18	4.0-12	---	7.9-9.0	5-15	0	4.0-16.0	30-60
Pyrat-----	0-6	12-20	5.0-15	---	7.9-8.4	1-10	0	2.0-4.0	0
	6-14	10-18	5.0-10	---	7.9-8.4	5-15	0	2.0-4.0	0
	14-21	10-18	5.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	21-42	10-18	1.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	42-60	5-10	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
Wendane-----	0-8	15-25	15-25	---	8.5-9.6	5-15	0	16.0-32.0	46-99
	8-42	15-25	15-25	---	7.9-9.6	5-15	0	16.0-32.0	1-12
	42-60	27-35	25-40	---	7.9-9.6	5-15	0	16.0-32.0	1-5
0830: Pharo-----	0-13	15-20	15-25	---	7.4-8.4	5-15	0	0	0
	13-36	10-20	10-15	---	7.9-9.0	40-55	0	0	0
	36-60	2-8	5.0-10	---	7.9-9.0	30-40	0	0	0
Kzin-----	0-3	15-25	10-25	---	7.9-9.0	15-25	0	0.0-2.0	1-5
	3-9	15-25	10-20	---	7.9-9.0	15-30	0	0.0-2.0	1-5
	9-13	---	---	---	---	---	---	---	---
Pharo-----	0-13	15-20	15-25	---	7.4-8.4	5-15	0	0	0
	13-36	10-20	10-15	---	7.9-9.0	40-55	0	0	0
	36-60	2-8	5.0-10	---	7.9-9.0	30-40	0	0	0
0842: Katelana-----	0-5	14-24	10-25	---	8.5-9.0	20-40	0	4.0-8.0	2-12
	5-28	18-25	10-20	---	8.5-9.0	40-50	0	4.0-8.0	2-12
	28-32	18-25	10-20	---	8.5-9.0	40-60	0	16.0-32.0	46-90
	32-60	27-40	15-35	---	8.5-9.0	40-60	1-2	16.0-32.0	90-180

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Timpie-----	0-8	18-27	10-15	---	8.5-9.0	15-40	0	0.0-4.0	5-13
	8-19	18-27	10-15	---	8.5-9.6	15-40	0	4.0-8.0	13-50
	19-60	18-27	10-15	---	8.5-9.6	15-40	0	16.0-32.0	13-50
0843: Katelana-----	0-5	14-24	10-25	---	8.5-9.0	20-40	0	4.0-8.0	2-12
	5-28	18-25	10-20	---	8.5-9.0	40-50	0	4.0-8.0	2-12
	28-32	18-25	10-20	---	8.5-9.0	40-60	0	16.0-32.0	46-90
	32-60	27-40	15-35	---	8.5-9.0	40-60	1-2	16.0-32.0	90-180
Kawich-----	0-2	0-5	1.0-5.0	---	8.5-9.6	1-5	1-5	4.0-8.0	1-5
	2-60	0-5	1.0-5.0	---	8.5-9.6	1-10	1-5	4.0-8.0	1-5
0845: Katelana-----	0-5	14-24	10-25	---	8.5-9.0	20-40	0	4.0-8.0	2-12
	5-28	18-25	10-20	---	8.5-9.0	40-50	0	4.0-8.0	2-12
	28-32	18-25	10-20	---	8.5-9.0	40-60	0	16.0-32.0	46-90
	32-60	27-40	15-35	---	8.5-9.0	40-60	1-2	16.0-32.0	90-180
Ragtown-----	0-5	20-27	10-20	---	8.5-9.6	10-30	0	4.0-8.0	1-5
	5-26	25-35	15-30	---	8.5-9.6	10-30	0	16.0-32.0	13-45
	26-60	35-45	20-40	---	8.5-9.6	20-40	0-2	16.0-32.0	31-90
Timpie-----	0-8	18-27	10-15	---	8.5-9.0	15-40	0	0.0-4.0	5-13
	8-19	18-27	10-15	---	8.5-9.6	15-40	0	4.0-8.0	13-50
	19-60	18-27	10-15	---	8.5-9.6	15-40	0	16.0-32.0	13-50
0847: Mazuma-----	0-15	10-14	5.0-10	---	7.9-9.6	1-5	0	0.0-4.0	5-12
	15-60	5-15	2.0-10	---	7.9-9.6	1-10	1-2	4.0-16.0	13-45
Blimo-----	0-7	12-18	10-20	---	7.9-8.4	5-15	0	0	0
	7-25	12-18	10-15	---	7.9-9.0	20-30	0	2.0-4.0	1-5
	25-40	12-18	10-15	---	7.9-9.0	20-30	0	2.0-4.0	5-12
	40-60	4-12	1.0-10	---	7.9-9.0	10-20	1-5	2.0-4.0	5-12
Wintermute-----	0-3	8-18	5.0-15	---	7.9-8.4	5-10	0	0	1-5
	3-15	8-18	5.0-15	---	7.9-9.0	5-15	0	0	1-5
	15-53	8-18	5.0-15	---	7.9-9.0	15-35	0	0	1-12
	53-60	27-35	10-20	---	7.9-9.0	15-35	0	0	1-12
0850: Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	1-5
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
Wintermute-----	0-3	8-18	5.0-15	---	7.9-8.4	5-10	0	0	1-5
	3-15	8-18	5.0-15	---	7.9-9.0	5-15	0	0	1-5
	15-53	8-18	5.0-15	---	7.9-9.0	15-35	0	0	1-12
	53-60	27-35	10-20	---	7.9-9.0	15-35	0	0	1-12
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0
0851: Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	1-5
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
Zimbob-----	0-1	10-18	5.0-10	---	7.9-9.0	50-70	0	0	1-5
	1-6	10-18	5.0-10	---	7.9-9.0	50-70	0	0	1-5
	6-10	---	---	---	---	---	---	---	---

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Tecomar-----	0-2	18-27	10-20	---	7.9-9.0	10-30	0	0.0-2.0	0
	2-14	20-27	5.0-15	---	7.9-9.0	20-40	0	0.0-2.0	1-5
	14-18	---	---	---	---	---	---	---	---
0852: Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	1-5
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
Pyrat-----	0-6	12-20	5.0-15	---	7.9-8.4	1-10	0	2.0-4.0	0
	6-14	10-18	5.0-10	---	7.9-8.4	5-15	0	2.0-4.0	0
	14-21	10-18	5.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	21-42	10-18	1.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	42-60	5-10	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
Shabliss-----	0-2	10-18	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	2-15	5-15	5.0-15	---	6.6-9.0	5-25	0	0.0-4.0	5-12
	15-31	---	---	---	---	---	---	---	---
	31-60	0-5	2.0-10	---	7.9-9.6	10-30	0	4.0-8.0	13-30
0854: Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	1-5
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
Automal-----	0-8	15-25	15-25	---	7.9-9.0	15-20	0	0	0
	8-49	10-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	1-5
	49-60	5-15	5.0-10	---	7.9-9.0	15-30	0	8.0-16.0	13-30
Shabliss-----	0-2	10-18	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	2-15	5-15	5.0-15	---	6.6-9.0	5-25	0	0.0-4.0	5-12
	15-31	---	---	---	---	---	---	---	---
	31-60	0-5	2.0-10	---	7.9-9.6	10-30	0	4.0-8.0	13-30
0856: Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	1-5
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
Parisa-----	0-5	8-18	5.0-15	---	7.9-9.0	1-5	0	0	0
	5-36	8-18	5.0-15	---	7.9-9.0	15-40	0	0	0
	36-60	---	---	---	---	---	---	---	---
0857: Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	1-5
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12
Shabliss-----	0-2	10-18	10-20	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	2-15	5-15	5.0-15	---	6.6-9.0	5-25	0	0.0-4.0	5-12
	15-31	---	---	---	---	---	---	---	---
	31-60	0-5	2.0-10	---	7.9-9.6	10-30	0	4.0-8.0	13-30
Linoyer-----	0-9	12-18	5.0-15	---	7.9-9.0	5-20	0	0.0-2.0	0
	9-60	12-18	5.0-15	---	7.9-9.0	10-30	0	0.0-2.0	0
0858: Palinor-----	0-8	10-18	5.0-15	---	7.9-9.0	15-25	0	0	1-5
	8-16	10-18	5.0-10	---	7.9-9.0	20-40	0	2.0-4.0	1-5
	16-34	---	---	---	---	---	---	---	---
	34-60	2-8	0.0-5.0	---	7.9-9.0	25-45	0	0	1-12

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Automal-----	0-8	15-25	15-25	---	7.9-9.0	15-20	0	0	0
	8-49	10-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	1-5
	49-60	5-15	5.0-10	---	7.9-9.0	15-30	0	8.0-16.0	13-30
Linoyer-----	0-9	12-18	5.0-15	---	7.9-9.0	5-20	0	0.0-2.0	0
	9-60	12-18	5.0-15	---	7.9-9.0	10-30	0	0.0-2.0	0
0870: Theriot-----	0-7	8-15	5.0-10	---	7.9-9.6	40-60	0	0.0-4.0	1-5
	7-18	5-14	1.0-10	---	7.9-9.6	40-60	0	0.0-4.0	1-5
	18-22	---	---	---	---	---	---	---	---
Zimbob-----	0-2	10-18	5.0-10	---	7.9-9.0	50-70	0	0	1-5
	2-11	10-18	5.0-10	---	7.9-9.0	50-70	0	0	1-5
	11-15	---	---	---	---	---	---	---	---
0880: Duffer-----	0-4	20-27	10-20	---	7.9-9.6	20-40	1-2	8.0-16.0	46-90
	4-60	20-35	10-20	---	7.9-9.6	40-60	1-5	8.0-16.0	13-30
Duffer-----	0-25	27-35	15-30	---	7.9-9.6	20-40	1-2	4.0-16.0	31-45
	25-60	20-35	10-20	---	7.9-9.6	40-60	1-2	16.0-32.0	46-90
Kolda-----	0-4	18-25	15-30	---	8.5-9.6	1-5	0	4.0-8.0	0
	4-11	22-27	15-30	---	8.5-9.6	1-10	0	4.0-8.0	0
	11-60	40-50	25-40	---	8.5-9.6	10-40	0	4.0-8.0	0
0881: Duffer-----	0-4	20-27	10-20	---	7.9-9.6	20-40	1-2	8.0-16.0	46-90
	4-60	20-35	10-20	---	7.9-9.6	40-60	1-5	8.0-16.0	13-30
Kunzler-----	0-16	12-20	7.0-15	---	7.9-9.0	1-5	0	0.0-2.0	0-13
	16-48	10-18	4.0-12	---	7.9-9.0	15-20	0	4.0-16.0	13-30
	48-60	10-18	4.0-12	---	7.9-9.0	5-15	0	4.0-16.0	30-60
0882: Duffer-----	0-25	27-35	15-30	---	7.9-9.6	20-40	1-2	4.0-16.0	31-45
	25-60	20-35	10-20	---	7.9-9.6	40-60	1-2	16.0-32.0	46-90
Kolda-----	0-4	18-25	15-30	---	8.5-9.6	1-5	0	4.0-8.0	0
	4-11	22-27	15-30	---	8.5-9.6	1-10	0	4.0-8.0	0
	11-60	40-50	25-40	---	8.5-9.6	10-40	0	4.0-8.0	0
0894: Zerk-----	0-2	12-17	5.0-10	---	7.9-9.0	5-15	0	0.0-2.0	1-5
	2-16	12-17	5.0-10	---	7.9-9.0	10-20	0	0.0-2.0	5-12
	16-60	0-10	1.0-5.0	---	7.9-9.0	15-35	0	0.0-2.0	5-12
Threesee-----	0-3	10-18	5.0-10	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	3-14	10-20	5.0-10	---	7.9-8.4	10-20	0	0.0-2.0	1-5
	14-46	4-10	1.0-5.0	---	8.5-9.0	20-30	0	0.0-2.0	5-12
	46-60	2-8	1.0-5.0	---	8.5-9.0	10-20	0	0.0-2.0	5-12
Mazuma-----	0-15	10-14	5.0-10	---	7.9-9.6	1-5	0	0.0-4.0	5-12
	15-60	5-15	2.0-10	---	7.9-9.6	1-10	1-2	4.0-16.0	13-45
0900: Zerk-----	0-2	12-17	5.0-10	---	7.9-9.0	5-15	0	0.0-2.0	1-5
	2-16	12-17	5.0-10	---	7.9-9.0	10-20	0	0.0-2.0	5-12
	16-60	0-10	1.0-5.0	---	7.9-9.0	15-35	0	0.0-2.0	5-12
Automal-----	0-8	15-25	15-25	---	7.9-9.0	15-20	0	0	0
	8-49	10-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	1-5
	49-60	5-15	5.0-10	---	7.9-9.0	15-30	0	8.0-16.0	13-30
Linoyer-----	0-9	12-18	5.0-15	---	7.9-9.0	5-20	0	0.0-2.0	0
	9-60	12-18	5.0-15	---	7.9-9.0	10-30	0	0.0-2.0	0

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
0910: Ragtown-----	0-16 16-60	27-35 35-60	15-30 20-50	--- ---	8.5-9.6 8.5-9.6	10-30 20-40	0 0-2	0.0-4.0 16.0-32.0	13-30 46-90
Ragtown-----	0-5 5-26 26-60	20-27 25-35 35-45	10-20 15-30 20-40	--- --- ---	8.5-9.6 8.5-9.6 8.5-9.6	10-30 10-30 20-40	0 0 0-2	4.0-8.0 16.0-32.0 16.0-32.0	1-5 13-45 31-90
0912: Katelana-----	0-5 5-28 28-32 32-60	14-24 18-25 18-25 27-40	10-25 10-20 10-20 15-35	--- --- --- ---	8.5-9.0 8.5-9.0 8.5-9.0 8.5-9.0	20-40 40-50 40-60 40-60	0 0 0 1-2	4.0-8.0 4.0-8.0 16.0-32.0 16.0-32.0	2-12 2-12 46-90 90-180
Katelana-----	0-5 5-28 28-32 32-60	14-24 18-25 18-25 27-40	10-25 10-20 10-20 15-35	--- --- --- ---	8.5-9.0 8.5-9.0 8.5-9.0 8.5-9.0	20-40 40-50 40-60 40-60	0 0 0 1-2	4.0-8.0 4.0-8.0 16.0-32.0 16.0-32.0	2-12 2-12 46-90 90-180
0914: Katelana-----	0-5 5-28 28-32 32-60	14-24 18-25 18-25 27-40	10-25 10-20 10-20 15-35	--- --- --- ---	8.5-9.0 8.5-9.0 8.5-9.0 8.5-9.0	20-40 40-50 40-60 40-60	0 0 0 1-2	4.0-8.0 4.0-8.0 16.0-32.0 16.0-32.0	2-12 2-12 46-90 90-180
Benin-----	0-7 7-60	15-25 40-50	10-15 25-30	--- ---	7.9-9.0 7.9-9.6	1-5 1-10	0 1-5	8.0-16.0 4.0-16.0	0-13 13-50
Sheffit-----	0-4 4-60	10-18 35-50	5.0-10 20-30	--- ---	8.5-9.6 8.5-9.6	10-15 20-35	0 1-5	4.0-8.0 8.0-16.0	5-12 13-45
0917: Katelana-----	0-5 5-28 28-32 32-60	14-24 18-25 18-25 27-40	10-25 10-20 10-20 15-35	--- --- --- ---	8.5-9.0 8.5-9.0 8.5-9.0 8.5-9.0	20-40 40-50 40-60 40-60	0 0 0 1-2	4.0-8.0 4.0-8.0 16.0-32.0 16.0-32.0	2-12 2-12 46-90 90-180
Sheffit-----	0-4 4-60	17-27 35-50	10-20 20-30	--- ---	8.5-9.6 8.5-9.6	15-20 20-35	0 1-5	4.0-8.0 8.0-16.0	5-12 13-45
Ragtown-----	0-16 16-60	27-35 35-60	15-30 20-50	--- ---	8.5-9.6 8.5-9.6	10-30 20-40	0 0-2	0.0-4.0 16.0-32.0	13-30 46-90
0918: Katelana-----	0-5 5-28 28-32 32-60	14-24 18-25 18-25 27-40	10-25 10-20 10-20 15-35	--- --- --- ---	8.5-9.0 8.5-9.0 8.5-9.0 8.5-9.0	20-40 40-50 40-60 40-60	0 0 0 1-2	4.0-8.0 4.0-8.0 16.0-32.0 16.0-32.0	2-12 2-12 46-90 90-180
Zorravista-----	0-6 6-60	0-5 0-5	0.0-5.0 0.0-5.0	--- ---	7.9-9.0 7.4-9.0	1-10 1-10	0 0	0 0.0-2.0	0 0
Playas-----	0-6 6-60	27-40 35-70	20-40 20-40	--- ---	8.5-9.0 8.5-9.0	1-10 1-10	1-10 1-10	4.0-16.0 4.0-16.0	13-45 13-45
0930: Okan-----	0-8 8-38 38-60	8-18 8-18 4-8	5.0-15 5.0-10 1.0-5.0	--- --- ---	7.9-8.4 7.9-8.4 8.5-9.0	1-5 5-15 5-15	0 0 0	0 0 0	0 0 0
Toano-----	0-9 9-27 27-60	8-15 8-15 8-15	5.0-15 5.0-15 5.0-15	--- --- ---	7.9-9.0 7.9-9.0 7.9-9.0	10-20 15-30 15-30	0 0-1 0-1	0.0-2.0 0.0-4.0 8.0-16.0	0-2 0-2 1-12
Loray-----	0-12 12-60	10-15 0-8	5.0-15 1.0-8.0	--- ---	7.4-8.4 7.9-9.0	5-15 5-20	0 0	0.0-4.0 0.0-4.0	1-5 5-12

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

[illegible]

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth		Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct								
			meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm		
Tecomar-----	0-2	18-27	10-20	---	7.9-9.0	10-30	0	0.0-2.0	0	
	2-14	20-27	5.0-15	---	7.9-9.0	20-40	0	0.0-2.0	1-5	
	14-18	---	---	---	---	---	---	---	---	---
Pookaloo-----	0-2	10-18	10-20	---	7.9-8.4	20-30	0	0	0	
	2-14	10-18	10-20	---	7.9-8.4	30-50	0	0	0	
	14-18	---	---	---	---	---	---	---	---	---
0975: Zimbob-----	0-2	10-18	5.0-10	---	7.9-9.0	50-70	0	0	1-5	
	2-11	10-18	5.0-10	---	7.9-9.0	50-70	0	0	1-5	
	11-15	---	---	---	---	---	---	---	---	---
Tecomar-----	0-2	18-27	10-20	---	7.9-9.0	10-30	0	0.0-2.0	0	
	2-14	20-27	5.0-15	---	7.9-9.0	20-40	0	0.0-2.0	1-5	
	14-18	---	---	---	---	---	---	---	---	---
Tecomar-----	0-2	18-27	10-20	---	7.9-9.0	10-30	0	0.0-2.0	0	
	2-12	20-27	5.0-15	---	7.9-9.0	20-40	0	0.0-2.0	1-5	
	12-16	---	---	---	---	---	---	---	---	---
0980: Onkeyo-----	0-8	18-27	10-25	---	7.4-8.4	1-10	0	0	0	
	8-17	25-35	10-20	---	7.4-8.4	15-25	0	0.0-2.0	0	
	17-21	---	---	---	---	---	---	---	---	---
Pookaloo-----	0-2	10-18	10-20	---	7.9-8.4	20-30	0	0	0	
	2-14	10-18	10-20	---	7.9-8.4	30-50	0	0	0	
	14-18	---	---	---	---	---	---	---	---	---
Zimbob-----	0-2	10-18	5.0-10	---	7.9-9.0	50-70	0	0	1-5	
	2-11	10-18	5.0-10	---	7.9-9.0	50-70	0	0	1-5	
	11-15	---	---	---	---	---	---	---	---	---
0990: Hyzen-----	0-3	8-18	5.0-20	---	7.9-8.4	20-35	0	0	0	
	3-13	10-18	5.0-15	---	7.9-8.4	30-60	0	0	0	
	13-17	---	---	---	---	---	---	---	---	---
Zimbob-----	0-1	10-18	5.0-10	---	7.9-9.0	50-70	0	0	1-5	
	1-6	10-18	5.0-10	---	7.9-9.0	50-70	0	0	1-5	
	6-10	---	---	---	---	---	---	---	---	---
0991: Hyzen-----	0-3	8-18	5.0-20	---	7.9-8.4	20-35	0	0	0	
	3-13	10-18	5.0-15	---	7.9-8.4	30-60	0	0	0	
	13-17	---	---	---	---	---	---	---	---	---
Cavehill-----	0-12	18-27	15-30	---	7.9-9.0	10-20	0	0	0	
	12-30	18-27	10-20	---	7.9-9.0	30-50	0	0.0-2.0	0	
	30-34	---	---	---	---	---	---	---	---	---
Tecomar-----	0-2	18-27	10-20	---	7.9-9.0	10-30	0	0.0-2.0	0	
	2-14	20-27	5.0-15	---	7.9-9.0	20-40	0	0.0-2.0	1-5	
	14-18	---	---	---	---	---	---	---	---	---
1000: Pyrat-----	0-6	12-20	5.0-15	---	7.9-8.4	1-10	0	2.0-4.0	0	
	6-14	10-18	5.0-10	---	7.9-8.4	5-15	0	2.0-4.0	0	
	14-21	10-18	5.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0	
	21-42	10-18	1.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0	
	42-60	5-10	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0	
Zerk-----	0-2	12-17	5.0-10	---	7.9-9.0	5-15	0	0.0-2.0	1-5	
	2-16	12-17	5.0-10	---	7.9-9.0	10-20	0	0.0-2.0	5-12	
	16-60	0-10	1.0-5.0	---	7.9-9.0	15-35	0	0.0-2.0	5-12	

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
1001: Pyrat-----	0-6	12-20	5.0-15	---	7.9-8.4	1-10	0	2.0-4.0	0
	6-14	10-18	5.0-10	---	7.9-8.4	5-15	0	2.0-4.0	0
	14-21	10-18	5.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	21-42	10-18	1.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	42-60	5-10	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0
Eastwell-----	0-5	10-18	5.0-15	---	8.5-9.0	0-5	0	0	1-5
	5-18	10-27	5.0-20	---	8.5-9.0	5-10	0	0.0-2.0	13-30
	18-27	---	---	---	---	---	---	---	---
	27-60	10-20	5.0-15	---	8.5-9.6	15-30	0	0.0-2.0	13-30
1002: Threesee-----	0-3	4-10	5.0-10	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	3-14	10-20	5.0-10	---	7.9-8.4	10-20	0	0.0-2.0	1-5
	14-46	4-10	1.0-5.0	---	8.5-9.0	20-30	0	0.0-2.0	5-12
	46-60	2-8	1.0-5.0	---	8.5-9.0	10-20	0	0.0-2.0	5-12
Kunzler-----	0-5	12-20	7.0-15	---	7.9-9.0	1-5	0	0.0-2.0	0-13
	5-48	10-18	4.0-12	---	7.9-9.0	15-20	0	4.0-16.0	13-30
	48-60	10-18	4.0-12	---	7.9-9.0	5-15	0	4.0-16.0	30-60
Threesee-----	0-3	10-18	5.0-10	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	3-14	10-20	5.0-10	---	7.9-8.4	10-20	0	0.0-2.0	1-5
	14-46	4-10	1.0-5.0	---	8.5-9.0	20-30	0	0.0-2.0	5-12
	46-60	2-8	1.0-5.0	---	8.5-9.0	10-20	0	0.0-2.0	5-12
1003: Pyrat-----	0-6	12-20	5.0-15	---	7.9-8.4	1-10	0	2.0-4.0	0
	6-14	10-18	5.0-10	---	7.9-8.4	5-15	0	2.0-4.0	0
	14-21	10-18	5.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	21-42	10-18	1.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	42-60	5-10	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
Hundraw-----	0-5	8-18	5.0-15	---	7.9-8.4	5-10	0	0.0-2.0	0
	5-10	8-18	5.0-15	---	7.9-8.4	5-15	0	0.0-2.0	0
	10-14	---	---	---	---	---	---	---	---
Tulase-----	0-2	8-18	10-15	---	7.9-8.4	5-10	0	0.0-2.0	0
	2-60	8-18	5.0-15	---	7.9-9.0	10-15	0	0.0-2.0	1-5
1004: Pyrat-----	0-6	12-20	5.0-15	---	7.9-8.4	1-10	0	2.0-4.0	0
	6-14	10-18	5.0-10	---	7.9-8.4	5-15	0	2.0-4.0	0
	14-21	10-18	5.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	21-42	10-18	1.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	42-60	5-10	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
Parisa-----	0-5	8-18	5.0-15	---	7.9-9.0	1-5	0	0.0-2.0	1-5
	5-36	8-18	5.0-15	---	7.9-9.0	15-40	0	0.0-2.0	5-12
	36-55	---	---	---	---	---	---	---	---
	55-60	0-8	1.0-5.0	---	7.9-9.0	15-30	0	2.0-8.0	13-30
Tulase-----	0-2	8-18	10-15	---	7.9-8.4	5-10	0	0.0-2.0	0
	2-60	8-18	5.0-15	---	7.9-9.0	10-15	0	0.0-2.0	1-5
1005: Pyrat-----	0-6	12-20	5.0-15	---	7.9-8.4	1-10	0	2.0-4.0	0
	6-14	10-18	5.0-10	---	7.9-8.4	5-15	0	2.0-4.0	0
	14-21	10-18	5.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	21-42	10-18	1.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	42-60	5-10	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Zerk-----	0-2	12-17	5.0-10	---	7.9-9.0	5-15	0	0.0-2.0	1-5
	2-16	12-17	5.0-10	---	7.9-9.0	10-20	0	0.0-2.0	5-12
	16-60	0-10	1.0-5.0	---	7.9-9.0	15-35	0	0.0-2.0	5-12
Parisa-----	0-5	8-18	5.0-15	---	7.9-9.0	1-5	0	0.0-2.0	1-5
	5-36	8-18	5.0-15	---	7.9-9.0	15-40	0	0.0-2.0	5-12
	36-55	---	---	---	---	---	---	---	---
	55-60	0-8	1.0-5.0	---	7.9-9.0	15-30	0	2.0-8.0	13-30
1006: Pyrat-----	0-6	12-20	5.0-15	---	7.9-8.4	1-10	0	2.0-4.0	0
	6-14	10-18	5.0-10	---	7.9-8.4	5-15	0	2.0-4.0	0
	14-21	10-18	5.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	21-42	10-18	1.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	42-60	5-10	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
Blimo-----	0-7	12-18	10-15	---	7.9-8.4	5-15	0	2.0-4.0	0
	7-25	12-18	10-15	---	7.9-9.0	20-30	0	2.0-4.0	1-5
	25-40	12-18	10-15	---	7.9-9.0	20-30	0	2.0-4.0	5-12
	40-60	4-12	1.0-10	---	7.9-9.0	10-20	1-5	2.0-4.0	5-12
1007: Pyrat-----	0-6	12-20	5.0-15	---	7.9-8.4	1-10	0	2.0-4.0	0
	6-14	10-18	5.0-10	---	7.9-8.4	5-15	0	2.0-4.0	0
	14-21	10-18	5.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	21-42	10-18	1.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	42-60	5-10	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
Parisa-----	0-5	8-18	5.0-15	---	7.9-9.0	1-5	0	0.0-2.0	1-5
	5-36	8-18	5.0-15	---	7.9-9.0	15-40	0	0.0-2.0	5-12
	36-55	---	---	---	---	---	---	---	---
	55-60	0-8	1.0-5.0	---	7.9-9.0	15-30	0	2.0-8.0	13-30
Automal-----	0-8	15-25	15-25	---	7.9-9.0	15-20	0	0	0
	8-49	10-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	1-5
	49-60	5-15	5.0-10	---	7.9-9.0	15-30	0	8.0-16.0	13-30
1009: Pyrat-----	0-6	12-20	5.0-15	---	7.9-8.4	1-10	0	2.0-4.0	0
	6-14	10-18	5.0-10	---	7.9-8.4	5-15	0	2.0-4.0	0
	14-21	10-18	5.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	21-42	10-18	1.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	42-60	5-10	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
Tulase-----	0-2	8-18	10-15	---	7.9-8.4	5-10	0	0.0-2.0	0
	2-60	8-18	5.0-15	---	7.9-9.0	10-15	0	0.0-2.0	1-5
Wintermute-----	0-3	8-18	5.0-15	---	7.9-8.4	5-10	0	0	1-5
	3-15	8-18	5.0-15	---	7.9-9.0	5-15	0	0	1-5
	15-53	8-18	5.0-15	---	7.9-9.0	15-35	0	0	1-12
	53-60	27-35	10-20	---	7.9-9.0	15-35	0	0	1-12
1020: Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0
Eastwell-----	0-5	10-18	5.0-15	---	8.5-9.0	0-5	0	0	1-5
	5-18	10-27	5.0-20	---	8.5-9.0	5-10	0	0.0-2.0	13-30
	18-27	---	---	---	---	---	---	---	---
	27-60	10-20	5.0-15	---	8.5-9.6	15-30	0	0.0-2.0	13-30
Blimo-----	0-7	12-18	10-20	---	7.9-8.4	5-15	0	0	0
	7-25	12-18	10-15	---	7.9-9.0	20-30	0	2.0-4.0	1-5
	25-40	12-18	10-15	---	7.9-9.0	20-30	0	2.0-4.0	5-12
	40-60	4-12	1.0-10	---	7.9-9.0	10-20	1-5	2.0-4.0	5-12

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
1023:									
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0
Katelana-----	0-5	14-24	10-25	---	8.5-9.0	20-40	0	4.0-8.0	2-12
	5-28	18-25	10-20	---	8.5-9.0	40-50	0	4.0-8.0	2-12
	28-32	18-25	10-20	---	8.5-9.0	40-60	0	16.0-32.0	46-90
	32-60	27-40	15-35	---	8.5-9.0	40-60	1-2	16.0-32.0	90-180
1030:									
Segura-----	0-2	20-27	15-20	---	6.6-8.4	0	0	0	0
	2-11	20-35	15-25	---	6.6-8.4	0	0	0	0
	11-15	---	---	---	---	---	---	---	---
Bullump-----	0-10	15-25	15-30	---	6.1-7.8	0	0	0	0
	10-49	25-35	10-25	---	6.1-7.8	0	0	0	0
	49-53	---	---	---	---	---	---	---	---
Hutchley-----	0-4	12-25	11-21	---	6.6-7.8	0	0	0	0
	4-13	28-35	17-22	---	6.6-7.8	0	0	0	0
	13-17	---	---	---	---	---	---	---	---
1040:									
Segura-----	0-2	15-20	10-15	---	6.6-8.4	0	0	0	0
	2-11	20-35	15-25	---	6.6-8.4	0	0	0	0
	11-15	---	---	---	---	---	---	---	---
Pioche-----	0-2	8-12	10-20	---	6.6-7.8	0	0	0	0
	2-12	35-50	25-35	---	6.6-7.8	0	0	0	0
	12-16	---	---	---	---	---	---	---	---
Chen-----	0-3	20-27	15-25	---	6.1-7.8	0	0	0	0
	3-16	40-55	25-40	---	6.1-7.8	0	0	0	0
	16-20	---	---	---	---	---	---	---	---
1061:									
Pioche-----	0-2	8-12	10-20	---	6.6-7.8	0	0	0	0
	2-12	35-50	25-35	---	6.6-7.8	0	0	0	0
	12-16	---	---	---	---	---	---	---	---
Cucamonga-----	0-3	10-18	10-20	---	6.6-7.8	0	0	0	0
	3-14	20-30	15-25	---	6.6-8.4	0	0	0.0-2.0	0-1
	14-19	---	---	---	---	---	---	---	---
Rock Outcrop----	---	---	---	---	---	---	---	---	---
1070:									
Zafod-----	0-7	5-15	1.0-10	---	7.9-8.4	1-5	0	0	0
	7-28	5-15	1.0-5.0	---	8.5-9.0	5-10	0	0	1-5
	28-38	---	---	---	---	---	---	---	---
	38-60	2-8	0.0-5.0	---	7.9-9.0	5-10	0	0	1-5
Automal-----	0-8	10-20	15-25	---	7.9-9.0	15-20	0	0	0
	8-49	10-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	1-5
	49-60	5-15	5.0-10	---	7.9-9.0	15-30	0	8.0-16.0	13-30
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
1080: Cotant-----	0-2	27-40	25-35	---	6.6-7.8	0	0	0	0
	2-15	40-60	35-50	---	6.6-7.8	0	0	0	0
	15-19	---	---	---	---	---	---	---	---
Segura-----	0-2	15-20	10-15	---	6.6-8.4	0	0	0	0
	2-11	20-35	15-25	---	6.6-8.4	0	0	0	0
	11-15	---	---	---	---	---	---	---	---
1111: Parisa-----	0-5	8-18	5.0-15	---	7.9-9.0	1-5	0	0.0-2.0	1-5
	5-36	8-18	5.0-15	---	7.9-9.0	15-40	0	0.0-2.0	5-12
	36-55	---	---	---	---	---	---	---	---
	55-60	0-8	1.0-5.0	---	7.9-9.0	15-30	0	2.0-8.0	13-30
1120: Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0
Automal-----	0-8	15-25	15-25	---	7.9-9.0	15-20	0	0	0
	8-49	10-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	1-5
	49-60	5-15	5.0-10	---	7.9-9.0	15-30	0	8.0-16.0	13-30
1150: Adobe-----	0-7	18-27	12-20	---	7.9-8.4	5-15	0	0	0
	7-11	18-27	12-20	---	7.9-8.4	35-45	0	0	0
	11-15	---	---	---	---	---	---	---	---
Wardbay-----	0-14	18-27	25-35	---	7.4-8.4	40-60	0	0	0
	14-55	18-27	5.0-15	---	7.9-8.4	40-60	0	0	0
	55-59	---	---	---	---	---	---	---	---
Haunchee-----	0-4	10-20	10-25	---	7.4-8.4	10-20	0	0	0
	4-11	10-20	5.0-20	---	7.9-9.0	30-50	0	0.0-2.0	1-13
	11-15	---	---	---	---	---	---	---	---
1161: Pharo-----	0-13	15-20	15-25	---	7.4-8.4	5-15	0	0	0
	13-36	10-20	10-15	---	7.9-9.0	40-55	0	0	0
	36-60	2-8	5.0-10	---	7.9-9.0	30-40	0	0	0
Bobs-----	0-8	10-20	10-20	---	7.9-9.0	20-30	0	0	0
	8-13	10-20	8.0-18	---	7.9-9.0	35-45	0	0.0-2.0	1-5
	13-17	---	---	---	---	---	---	---	---
Pookaloo-----	0-2	10-18	10-20	---	7.9-8.4	20-30	0	0	0
	2-14	10-18	10-20	---	7.9-8.4	30-50	0	0	0
	14-18	---	---	---	---	---	---	---	---
1171: Pyrat-----	0-6	12-20	5.0-15	---	7.9-8.4	1-10	0	2.0-4.0	0
	6-14	10-18	5.0-10	---	7.9-8.4	5-15	0	2.0-4.0	0
	14-21	10-18	5.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	21-42	10-18	1.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	42-60	5-10	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
Automal-----	0-8	18-25	15-25	---	7.9-9.0	15-20	0	0	0
	8-49	10-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	1-5
	49-60	5-15	5.0-10	---	7.9-9.0	15-30	0	8.0-16.0	13-30
Gravier-----	0-3	8-18	5.0-15	---	7.9-9.0	5-10	0	0.0-4.0	1-5
	3-60	8-18	5.0-15	---	7.9-9.0	15-30	0	4.0-8.0	13-30

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
1172: Pyrat-----	0-6	10-18	5.0-15	---	7.9-9.0	1-10	0	0.0-2.0	0
	6-14	10-18	5.0-10	---	7.9-8.4	5-15	0	2.0-4.0	0
	14-21	10-18	5.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	21-42	10-18	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
	42-60	5-10	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
Automal-----	0-8	10-18	15-25	---	7.9-9.0	15-20	0	0	0
	8-49	10-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	1-5
	49-60	5-15	5.0-10	---	7.9-9.0	15-30	0	8.0-16.0	15-30
Automal-----	0-8	18-25	15-25	---	7.9-9.0	15-20	0	0	0
	8-49	10-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	1-5
	49-60	5-15	5.0-10	---	7.9-9.0	15-30	0	8.0-16.0	13-30
1173: Pyrat-----	0-6	8-18	5.0-15	---	7.9-9.0	1-10	0	0.0-4.0	0
	6-14	10-18	5.0-10	---	7.9-8.4	5-15	0	2.0-4.0	0
	14-21	10-18	5.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	21-42	10-18	1.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	42-60	5-10	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
Automal-----	0-8	15-25	15-25	---	7.9-9.0	15-20	0	0	0
	8-49	10-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	1-5
	49-60	5-15	5.0-10	---	7.9-9.0	15-30	0	8.0-16.0	13-30
1174: Pyrat-----	0-6	12-20	5.0-15	---	7.9-8.4	1-10	0	2.0-4.0	0
	6-14	10-18	5.0-10	---	7.9-8.4	5-15	0	2.0-4.0	0
	14-21	10-18	5.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	21-42	10-18	1.0-10	---	7.9-9.0	15-25	0	2.0-4.0	0
	42-60	5-10	1.0-10	---	7.9-9.0	10-15	0	2.0-4.0	0
Tosser-----	0-10	5-15	4.0-13	---	7.4-8.4	3-15	0	0.0-2.0	0
	10-16	2-8	2.0-4.0	---	8.5-9.0	15-35	0	0.0-4.0	5-10
	16-26	2-8	2.0-4.0	---	8.5-9.0	1-3	0	0.0-4.0	5-10
	26-60	2-8	2.0-4.0	---	8.5-9.0	3-15	0	0.0-4.0	5-10
1180: Haunchee-----	0-4	10-20	10-25	---	7.4-8.4	10-20	0	0	0
	4-11	10-20	5.0-20	---	7.9-9.0	30-50	0	0.0-2.0	1-13
	11-15	---	---	---	---	---	---	---	---
Cavehill-----	0-12	18-27	15-30	---	7.9-9.0	10-20	0	0	0
	12-30	18-27	10-20	---	7.9-9.0	30-50	0	0.0-2.0	0
	30-34	---	---	---	---	---	---	---	---
1181: Haunchee-----	0-4	10-20	10-25	---	7.4-8.4	10-20	0	0	0
	4-11	10-20	5.0-20	---	7.9-9.0	30-50	0	0.0-2.0	1-13
	11-15	---	---	---	---	---	---	---	---
Halacan-----	0-5	10-18	5.0-15	---	7.9-8.4	10-20	0	0	0
	5-12	10-18	5.0-15	---	7.9-9.0	25-40	0	0.0-2.0	0
	12-16	---	---	---	---	---	---	---	---
Wardbay-----	0-14	18-27	25-35	---	7.4-8.4	40-60	0	0	0
	14-55	18-27	5.0-15	---	7.9-8.4	40-60	0	0	0
	55-59	---	---	---	---	---	---	---	---
1190: Upstad-----	0-2	18-27	15-25	---	7.4-7.8	0	0	0	0

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Atlow-----	0-5	15-25	10-25	---	7.4-8.4	0	0	0	0
	5-18	27-35	15-30	---	7.9-9.0	0-5	0	0.0-2.0	0
	18-22	---	---	---	---	---	---	---	---
Upatad-----	0-1	18-27	15-25	---	7.4-7.8	0	0	0	0
	1-12	27-35	25-35	---	7.4-8.4	1-10	0	0	0
	12-16	---	---	---	---	---	---	---	---
1191:									
Upatad-----	0-2	18-27	15-25	---	7.4-7.8	0	0	0	0
	2-14	27-35	25-35	---	7.4-8.4	1-10	0	0	0
	14-18	---	---	---	---	---	---	---	---
Pioche-----	0-2	8-12	10-20	---	6.6-7.8	0	0	0	0
	2-12	35-50	25-35	---	6.6-7.8	0	0	0	0
	12-16	---	---	---	---	---	---	---	---
Rock Outcrop----	---	---	---	---	---	---	---	---	---
1200:									
Hardol-----	0-13	18-27	10-25	---	7.4-8.4	1-10	0	0	0
	13-37	20-27	10-25	---	7.4-8.4	10-20	0	0	0
	37-60	20-27	10-20	---	7.9-8.4	15-25	0	0	0
Hardzem-----	0-5	10-20	5.0-15	---	7.4-7.8	0	0	0	0
	5-28	20-30	10-20	---	6.6-7.8	0	0	0	0
	28-55	---	---	---	---	---	---	---	---
Rock Outcrop----	---	---	---	---	---	---	---	---	---
1201:									
Hardol-----	0-13	18-27	10-25	---	7.4-8.4	1-10	0	0	0
	13-37	20-27	10-25	---	7.4-8.4	10-20	0	0	0
	37-60	20-27	10-20	---	7.9-8.4	15-25	0	0	0
Rock Outcrop----	---	---	---	---	---	---	---	---	---
Wardbay-----	0-14	18-27	25-35	---	7.4-8.4	40-60	0	0	0
	14-55	18-27	5.0-15	---	7.9-8.4	40-60	0	0	0
	55-59	---	---	---	---	---	---	---	---
1210:									
Blimo-----	0-8	12-18	10-20	---	7.9-8.4	5-15	0	0	0
	8-21	12-18	10-15	---	7.9-8.4	5-15	0	2.0-4.0	1-5
	21-36	12-18	10-15	---	7.9-9.0	5-15	0	2.0-4.0	5-12
	36-60	12-18	10-15	---	7.9-9.0	5-15	1-5	2.0-4.0	5-12
Kunzler-----	0-5	12-20	7.0-15	---	7.9-9.0	1-5	0	0.0-2.0	0-13
	5-48	10-18	4.0-12	---	7.9-9.0	15-20	0	4.0-16.0	13-30
	48-60	10-18	4.0-12	---	7.9-9.0	5-15	0	4.0-16.0	30-60
Linoyer-----	0-9	12-18	5.0-15	---	7.9-9.0	5-20	0	0.0-2.0	0
	9-60	12-18	5.0-15	---	7.9-9.0	10-30	0	0.0-2.0	0
1213:									
Blimo-----	0-8	12-18	10-15	---	7.9-8.4	5-15	0	0	0
	8-21	12-18	10-15	---	7.9-8.4	5-15	0	2.0-4.0	1-5
	21-36	12-18	10-15	---	7.9-9.0	5-15	0	2.0-4.0	5-12
	36-60	12-18	10-15	---	7.9-9.0	5-15	1-5	2.0-4.0	5-12
Threesee-----	0-3	10-20	5.0-10	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	3-14	10-20	5.0-10	---	7.9-8.4	10-20	0	0.0-2.0	1-5
	14-46	4-10	1.0-5.0	---	8.5-9.0	20-30	0	0.0-2.0	5-12
	46-60	2-8	1.0-5.0	---	8.5-9.0	10-20	0	0.0-2.0	5-12

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
1215: Blimo-----	0-8	12-18	10-15	---	7.9-8.4	5-15	0	0	0
	8-21	12-18	10-15	---	7.9-8.4	5-15	0	2.0-4.0	1-5
	21-36	12-18	10-15	---	7.9-9.0	5-15	0	2.0-4.0	5-12
	36-60	12-18	10-15	---	7.9-9.0	5-15	1-5	2.0-4.0	5-12
Zorravista-----	0-6	0-5	0.0-5.0	---	7.9-9.0	1-10	0	0	0
	6-60	0-5	0.0-5.0	---	7.4-9.0	1-10	0	0.0-2.0	0
1216: Blimo-----	0-8	12-18	10-15	---	7.9-8.4	5-15	0	0	0
	8-21	12-18	10-15	---	7.9-8.4	5-15	0	2.0-4.0	1-5
	21-36	12-18	10-15	---	7.9-9.0	5-15	0	2.0-4.0	5-12
	36-60	12-18	10-15	---	7.9-9.0	5-15	1-5	2.0-4.0	5-12
Idway-----	0-4	8-18	5.0-10	---	7.9-9.0	1-10	0	0.0-2.0	1-5
	4-12	8-18	5.0-10	---	7.9-9.0	1-10	0	0.0-2.0	1-5
	12-27	8-18	5.0-15	---	8.5-9.6	5-15	0	0.0-2.0	1-5
	27-60	2-8	1.0-5.0	---	8.5-9.6	1-10	0	0.0-2.0	1-5
Mazuma-----	0-15	10-14	5.0-10	---	7.9-9.6	1-5	0	0.0-4.0	5-12
	15-60	5-15	2.0-10	---	7.9-9.6	1-10	1-2	4.0-16.0	13-45
1220: Onkeyo-----	0-8	18-27	10-25	---	7.4-8.4	1-10	0	0	0
	8-17	25-35	10-20	---	7.4-8.4	15-25	0	0.0-2.0	0
	17-21	---	---	---	---	---	---	---	---
Adobe-----	0-7	18-27	12-20	---	7.9-8.4	5-15	0	0	0
	7-11	18-27	12-20	---	7.9-8.4	35-45	0	0	0
	11-15	---	---	---	---	---	---	---	---
Pookaloo-----	0-2	10-18	10-20	---	7.9-8.4	20-30	0	0	0
	2-14	10-18	10-20	---	7.9-8.4	30-50	0	0	0
	14-18	---	---	---	---	---	---	---	---
1230: Hardzem-----	0-5	10-20	5.0-15	---	7.4-7.8	0	0	0	0
	5-28	20-30	10-20	---	6.6-7.8	0	0	0	0
	28-55	---	---	---	---	---	---	---	---
Haunchee-----	0-4	10-20	10-25	---	7.4-8.4	10-20	0	0	0
	4-11	10-20	5.0-20	---	7.9-9.0	30-50	0	0.0-2.0	1-13
	11-15	---	---	---	---	---	---	---	---
Wardbay-----	0-14	18-27	25-35	---	7.4-8.4	40-60	0	0	0
	14-55	18-27	5.0-15	---	7.9-8.4	40-60	0	0	0
	55-59	---	---	---	---	---	---	---	---
1240: Benin-----	0-7	30-40	15-25	---	7.9-9.0	1-5	0	8.0-16.0	0-13
	7-60	40-50	25-30	---	7.9-9.6	1-10	1-5	4.0-16.0	13-50
Benin-----	0-7	15-25	10-15	---	7.9-9.0	1-5	0	8.0-16.0	0-13
	7-60	40-50	25-30	---	7.9-9.6	1-10	1-5	4.0-16.0	13-50
1241: Benin-----	0-7	30-40	15-25	---	7.9-9.0	1-5	0	8.0-16.0	0-13
	7-60	40-50	25-30	---	7.9-9.6	1-10	1-5	4.0-16.0	13-50
Playas-----	0-6	27-40	20-40	---	8.5-9.0	1-10	1-10	4.0-16.0	13-45
	6-60	35-70	20-40	---	8.5-9.0	1-10	1-10	4.0-16.0	13-45
Benin-----	0-7	15-25	10-15	---	7.9-9.0	1-5	0	8.0-16.0	0-13
	7-60	40-50	25-30	---	7.9-9.6	1-10	1-5	4.0-16.0	13-50

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
1250: Tecomar-----	0-2 2-14 14-18	18-27 20-27 ---	10-20 5.0-15 ---	--- --- ---	7.9-9.0 7.9-9.0 ---	10-30 20-40 ---	0 0 ---	0.0-2.0 0.0-2.0 ---	0 1-5 ---
Pockaloo-----	0-2 2-14 14-18	10-18 10-18 ---	10-20 10-20 ---	--- --- ---	7.9-8.4 7.9-8.4 ---	20-30 30-50 ---	0 0 ---	0 0 ---	0 0 ---
1270: Katelana-----	0-5 5-28 28-32 32-60	14-24 18-25 18-25 27-40	10-25 10-20 10-20 15-35	--- --- --- ---	8.5-9.0 8.5-9.0 8.5-9.0 8.5-9.0	20-40 40-50 40-60 40-60	0 0 0 1-2	4.0-8.0 4.0-8.0 16.0-32.0 16.0-32.0	2-12 2-12 46-90 90-180
Sheffit-----	0-4 4-60	17-27 35-50	10-20 20-30	--- ---	8.5-9.6 8.5-9.6	15-20 20-35	0 1-5	4.0-8.0 8.0-16.0	5-12 13-45
1271: Uvada-----	0-5 5-8 8-17 17-52 52-60	27-40 35-60 35-60 35-50 35-50	15-25 25-45 25-45 20-40 20-40	--- --- --- --- ---	8.5-9.0 9.1-9.6 9.1-9.6 9.1-9.6 9.1-9.6	1-10 15-25 30-40 25-40 10-20	0 0 0 1-5 1-5	0.0-2.0 0.0-4.0 8.0-16.0 8.0-16.0 8.0-16.0	0-5 13-30 150-170 150-180 160-190
Ragtown-----	0-16 16-60	27-35 35-60	15-30 20-50	--- ---	8.5-9.6 8.5-9.6	10-30 20-40	0 0-2	0.0-4.0 16.0-32.0	13-30 46-90
1272: Katelana-----	0-5 5-28 28-32 32-60	14-24 18-25 18-25 27-40	10-25 10-20 10-20 15-35	--- --- --- ---	8.5-9.0 8.5-9.0 8.5-9.0 8.5-9.0	20-40 40-50 40-60 40-60	0 0 0 1-2	4.0-8.0 4.0-8.0 16.0-32.0 16.0-32.0	2-12 2-12 46-90 90-180
Kawich-----	0-2 2-60	0-5 0-5	1.0-5.0 1.0-5.0	--- ---	8.5-9.6 8.5-9.6	1-5 1-10	1-5 1-5	4.0-8.0 4.0-8.0	1-5 1-5
1280: Sycomat-----	0-4 4-15 15-44 44-60	10-18 5-18 5-18 2-5	5.0-10 2.0-10 2.0-10 1.0-5.0	--- --- --- ---	7.9-8.4 8.5-9.6 8.5-9.6 8.5-9.6	10-20 15-30 15-30 15-30	0 0 0 0	0.0-4.0 0.0-4.0 8.0-16.0 8.0-16.0	5-12 13-30 13-30 13-30
Kunzler-----	0-16 16-48 48-60	12-20 10-18 10-18	7.0-15 4.0-12 4.0-12	--- --- ---	7.9-9.0 7.9-9.0 7.9-9.0	1-5 15-20 5-15	0 0 0	0.0-2.0 4.0-16.0 4.0-16.0	0-13 13-30 30-60
1281: Sycomat-----	0-4 4-15 15-44 44-60	10-18 5-18 5-18 2-5	5.0-10 2.0-10 2.0-10 1.0-5.0	--- --- --- ---	7.9-8.4 8.5-9.6 8.5-9.6 8.5-9.6	10-20 15-30 15-30 15-30	0 0 0 0	0.0-4.0 0.0-4.0 8.0-16.0 8.0-16.0	5-12 13-30 13-30 13-30
Mazuma-----	0-15 15-60	10-14 5-15	5.0-10 2.0-10	--- ---	7.9-9.6 7.9-9.6	1-5 1-10	0 1-2	0.0-4.0 4.0-16.0	5-12 13-45
1290: Heist-----	0-4 4-40 40-60	8-18 8-18 8-18	5.0-15 5.0-15 5.0-10	--- --- ---	7.9-9.0 7.9-9.0 7.9-9.0	5-20 5-20 5-20	0 0 0	0.0-2.0 2.0-4.0 2.0-4.0	0-5 5-13 5-13
Blimo-----	0-8 8-21 21-36 36-60	12-18 12-18 12-18 12-18	10-20 10-15 10-15 10-15	--- --- --- ---	7.9-8.4 7.9-8.4 7.9-9.0 7.9-9.0	5-15 5-15 5-15 5-15	0 0 0 1-5	0 2.0-4.0 2.0-4.0 2.0-4.0	0 1-5 5-12 5-12

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
1300: Cavehill-----	0-12 12-30 30-34	18-27 18-27 ---	15-30 10-20 ---	--- --- ---	7.9-9.0 7.9-9.0 ---	10-20 30-50 ---	0 0 ---	0 0.0-2.0 ---	0 0 ---
Haunchee-----	0-4 4-11 11-15	10-20 10-20 ---	10-25 5.0-20 ---	--- --- ---	7.4-8.4 7.9-9.0 ---	10-20 30-50 ---	0 0 ---	0 0.0-2.0 ---	0 1-13 ---
Hardzem-----	0-5 5-28 28-55	10-20 20-30 ---	5.0-15 10-20 ---	--- --- ---	7.4-7.8 6.6-7.8 ---	0 0 ---	0 0 ---	0 0 ---	0 0 ---
1360: Toba-----	0-4 4-14 14-23 23-60	20-27 27-35 2-6 0-4	15-30 15-35 1.0-5.0 1.0-5.0	--- --- --- ---	8.5-9.0 8.5-9.0 8.5-9.0 7.9-8.4	5-10 15-25 5-10 1-5	0 0 0 0-1	0.0-2.0 0.0-2.0 0.0-2.0 0.0-2.0	5-12 13-45 13-45 13-45
Appian-----	0-3 3-19 19-27 27-60	15-20 27-35 2-5 0-5	9.0-13 16-22 1.0-5.0 0.0-5.0	--- --- --- ---	7.9-9.0 8.5-9.6 7.4-9.6 7.4-9.6	1-5 5-10 0 0	0 1-2 0 0	0.0-4.0 0.0-8.0 0.0-2.0 0.0-2.0	5-12 31-90 0-5 0-5
1370: Orupa-----	0-6 6-60	35-40 35-45	25-40 20-35	--- ---	7.9-9.0 7.9-9.0	15-30 20-30	0 1-2	0.0-4.0 0.0-8.0	5-12 5-12
Playas-----	0-6 6-60	27-40 35-70	20-40 20-40	--- ---	8.5-9.0 8.5-9.0	1-10 1-10	1-10 1-10	4.0-16.0 4.0-16.0	13-45 13-45
Boofuss-----	0-10 10-27 27-60	40-50 35-50 8-15	25-40 20-40 5.0-15	--- --- ---	8.5-9.6 8.5-9.6 8.5-9.0	1-10 1-10 1-10	0 0 1-2	16.0-32.0 16.0-32.0 0.0-2.0	50-80 50-80 10-30
1380: Hulderman-----	0-5 5-18 18-27 27-60	12-18 20-25 4-8 0-4	5.0-10 15-25 1.0-5.0 1.0-5.0	--- --- --- ---	8.5-9.0 7.9-8.4 7.9-8.4 7.9-8.4	1-5 0 0 0	0 0 0 0	0.0-4.0 0.0-2.0 0 0	1-5 1-5 0 0
Toba-----	0-4 4-14 14-23 23-60	20-27 27-35 2-6 0-4	15-30 15-35 1.0-5.0 1.0-5.0	--- --- --- ---	8.5-9.0 8.5-9.0 8.5-9.0 7.9-8.4	5-10 15-25 5-10 1-5	0 0 0 0-1	0.0-2.0 0.0-2.0 0.0-2.0 0.0-2.0	5-12 13-45 13-45 13-45
Benin-----	0-7 7-60	30-40 40-50	15-25 25-30	--- ---	7.9-9.0 7.9-9.6	1-5 1-10	0 1-5	8.0-16.0 4.0-16.0	0-13 13-50
1390: Wendane-----	0-8 8-42 42-60	15-25 15-25 27-35	15-25 15-25 25-40	--- --- ---	8.5-9.6 7.9-9.6 7.9-9.6	5-15 5-15 5-15	0 0 0	16.0-32.0 16.0-32.0 16.0-32.0	46-99 1-12 1-5
Mysol-----	0-5 5-17 17-31 31-60	27-35 20-35 20-35 2-8	20-25 10-20 10-20 0.0-5.0	--- --- --- ---	8.5-9.6 8.5-9.0 7.9-9.0 7.9-8.4	5-10 1-5 5-15 5-15	0-1 0-1 0-1 0-1	0.0-4.0 0.0-4.0 8.0-16.0 4.0-16.0	1-12 1-12 13-30 13-30
Toba-----	0-4 4-14 14-23 23-60	20-27 27-35 2-6 0-4	15-30 15-35 1.0-5.0 1.0-5.0	--- --- --- ---	8.5-9.0 8.5-9.0 8.5-9.0 7.9-8.4	5-10 15-25 5-10 1-5	0 0 0 0-1	0.0-2.0 0.0-2.0 0.0-2.0 0.0-2.0	5-12 13-45 13-45 13-45

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
1410: Threesee-----	0-3	10-20	5.0-10	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	3-14	10-20	5.0-10	---	7.9-8.4	10-20	0	0.0-2.0	1-5
	14-46	4-10	1.0-5.0	---	8.5-9.0	20-30	0	0.0-2.0	5-12
	46-60	2-8	1.0-5.0	---	8.5-9.0	10-20	0	0.0-2.0	5-12
Tosser-----	0-5	5-15	4.0-13	---	7.4-8.4	3-15	0	0.0-2.0	0
	5-16	2-8	2.0-4.0	---	8.5-9.0	15-35	0	0.0-4.0	5-10
	16-26	2-8	2.0-4.0	---	8.5-9.0	1-3	0	0.0-4.0	5-10
	26-60	2-8	2.0-4.0	---	8.5-9.0	3-15	0	0.0-4.0	5-10
1411: Threesee-----	0-3	10-18	5.0-10	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	3-14	10-20	5.0-10	---	7.9-8.4	10-20	0	0.0-2.0	1-5
	14-46	4-10	1.0-5.0	---	8.5-9.0	20-30	0	0.0-2.0	5-12
	46-60	2-8	1.0-5.0	---	8.5-9.0	10-20	0	0.0-2.0	5-12
Linoyer-----	0-9	12-18	5.0-15	---	7.9-9.0	10-20	0	0.0-2.0	0
	9-60	12-18	5.0-15	---	7.9-9.0	10-40	0	0.0-2.0	0
Okan-----	0-8	8-18	5.0-15	---	7.9-8.4	1-5	0	0	0
	8-38	8-18	5.0-10	---	7.9-8.4	5-15	0	0	0
	38-60	4-8	1.0-5.0	---	8.5-9.0	5-15	0	0	0
1412: Threesee-----	0-3	10-18	5.0-10	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	3-14	10-20	5.0-10	---	7.9-8.4	10-20	0	0.0-2.0	1-5
	14-46	4-10	1.0-5.0	---	8.5-9.0	20-30	0	0.0-2.0	5-12
	46-60	2-8	1.0-5.0	---	8.5-9.0	10-20	0	0.0-2.0	5-12
Idway-----	0-4	4-10	1.0-10	---	7.9-9.0	1-10	0	0.0-2.0	1-5
	4-12	8-18	5.0-10	---	7.9-9.0	1-10	0	0.0-2.0	1-5
	12-27	8-18	5.0-15	---	8.5-9.6	5-15	0	0.0-2.0	1-5
	27-60	2-8	1.0-5.0	---	8.5-9.6	1-10	0	0.0-2.0	1-5
1413: Idway-----	0-4	8-18	5.0-10	---	7.9-9.0	1-10	0	0.0-2.0	1-5
	4-12	8-18	5.0-10	---	7.9-9.0	1-10	0	0.0-2.0	1-5
	12-27	8-18	5.0-15	---	8.5-9.6	5-15	0	0.0-2.0	1-5
	27-60	2-8	1.0-5.0	---	8.5-9.6	1-10	0	0.0-2.0	1-5
Zoravista-----	0-6	0-5	0.0-5.0	---	7.9-9.0	1-10	0	0	0
	6-60	0-5	0.0-5.0	---	7.4-9.0	1-10	0	0.0-2.0	0
Kunzler-----	0-16	12-20	7.0-15	---	7.9-9.0	1-5	0	0.0-2.0	0-13
	16-48	10-18	4.0-12	---	7.9-9.0	15-20	0	4.0-16.0	13-30
	48-60	10-18	4.0-12	---	7.9-9.0	5-15	0	4.0-16.0	30-60
1414: Threesee-----	0-3	10-18	5.0-10	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	3-14	10-20	5.0-10	---	7.9-8.4	10-20	0	0.0-2.0	1-5
	14-46	4-10	1.0-5.0	---	8.5-9.0	20-30	0	0.0-2.0	5-12
	46-60	2-8	1.0-5.0	---	8.5-9.0	10-20	0	0.0-2.0	5-12
Shantown-----	0-2	2-8	5.0-15	---	6.6-7.8	0	0	0	0
	2-11	2-8	5.0-15	---	6.6-7.8	0	0	0	0
	11-33	8-12	5.0-10	---	7.4-7.8	0	0	0	0
	33-49	2-8	5.0-10	---	7.4-7.8	0-5	0	0	0
	49-60	2-6	1.0-5.0	---	7.9-8.4	1-10	0	0.0-4.0	0
Kunzler-----	0-16	12-20	7.0-15	---	7.9-9.0	1-5	0	0.0-2.0	0-13
	16-48	10-18	4.0-12	---	7.9-9.0	15-20	0	4.0-16.0	13-30
	48-60	10-18	4.0-12	---	7.9-9.0	5-15	0	4.0-16.0	30-60

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
1430:									
Pookaloo-----	0-2	10-18	10-20	---	7.9-8.4	20-30	0	0	0
	2-14	10-18	10-20	---	7.9-8.4	30-50	0	0	0
	14-18	---	---	---	---	---	---	---	---
Tacomar-----	0-2	18-27	10-20	---	7.9-9.0	10-30	0	0.0-2.0	0
	2-14	20-27	5.0-15	---	7.9-9.0	20-40	0	0.0-2.0	1-5
	14-18	---	---	---	---	---	---	---	---
Rock Outcrop----	---	---	---	---	---	---	---	---	---
1440:									
Boofuss-----	0-10	40-50	25-40	---	8.5-9.6	1-10	0	16.0-32.0	50-80
	10-27	35-50	20-40	---	8.5-9.6	1-10	0	16.0-32.0	50-80
	27-60	8-15	5.0-15	---	8.5-9.0	1-10	1-2	0.0-2.0	10-30
Boofuss-----	0-10	40-50	25-40	---	8.5-9.6	1-10	0	16.0-32.0	50-80
	10-27	35-50	20-40	---	8.5-9.6	1-10	0	16.0-32.0	50-80
	27-60	8-15	5.0-15	---	8.5-9.0	1-10	1-2	0.0-2.0	10-30
Equis-----	0-6	40-50	20-25	---	8.5-9.0	35-45	0	8.0-16.0	20-70
	6-24	40-50	15-25	---	8.5-9.6	45-65	1-2	8.0-16.0	5-70
	24-41	30-45	10-20	---	8.5-9.0	45-65	1-2	4.0-8.0	1-5
	41-60	20-45	10-20	---	8.5-9.0	40-60	1-2	0.0-4.0	1-5
1441:									
Boofuss-----	0-10	40-50	25-40	---	8.5-9.6	1-10	0	16.0-32.0	50-80
	10-27	35-50	20-40	---	8.5-9.6	1-10	0	16.0-32.0	50-80
	27-60	8-15	5.0-15	---	8.5-9.0	1-10	1-2	0.0-2.0	10-30
Wendane-----	0-8	15-25	15-25	---	8.5-9.6	5-15	0	16.0-32.0	46-99
	8-42	15-25	15-25	---	7.9-9.6	5-15	0	16.0-32.0	1-12
	42-60	27-35	25-40	---	7.9-9.6	5-15	0	16.0-32.0	1-5
Umberland-----	0-15	40-45	25-29	---	9.1-9.6	10-25	0	16.0-32.0	46-90
	15-60	35-50	22-32	---	8.5-9.6	10-25	1-5	4.0-16.0	46-90
1450:									
Piltown-----	0-10	10-18	5.0-15	---	7.4-9.0	1-5	0	0.0-4.0	0
	10-60	10-18	5.0-15	---	7.4-9.0	1-10	0	2.0-8.0	1-5
Kawich-----	0-2	0-5	1.0-5.0	---	8.5-9.6	1-5	1-5	4.0-8.0	1-5
	2-60	0-5	1.0-5.0	---	8.5-9.6	1-10	1-5	4.0-8.0	1-5
1460:									
Tosser-----	0-10	5-15	4.0-13	---	7.4-8.4	3-15	0	0.0-2.0	0
	10-16	2-8	2.0-4.0	---	8.5-9.0	15-35	0	0.0-4.0	5-10
	16-26	2-8	2.0-4.0	---	8.5-9.0	1-3	0	0.0-4.0	5-10
	26-60	2-8	2.0-4.0	---	8.5-9.0	3-15	0	0.0-4.0	5-10
Threesee-----	0-3	10-20	5.0-10	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	3-14	10-20	5.0-10	---	7.9-8.4	10-20	0	0.0-2.0	1-5
	14-46	4-10	1.0-5.0	---	7.9-9.0	20-30	0	0.0-2.0	5-12
	46-60	2-8	1.0-5.0	---	8.5-9.0	10-20	0	0.0-2.0	5-12
1471:									
Timpie-----	0-8	18-27	10-15	---	8.5-9.0	15-40	0	0.0-4.0	5-13
	8-19	18-27	10-15	---	8.5-9.6	15-40	0	4.0-8.0	13-50
	19-60	18-27	10-15	---	8.5-9.6	15-40	0	16.0-32.0	13-50
Kunzler-----	0-5	12-20	7.0-15	---	7.9-9.0	1-5	0	0.0-2.0	0-13
	5-48	10-18	4.0-12	---	7.9-9.0	15-20	0	4.0-16.0	15-30
	48-60	10-18	4.0-12	---	7.9-9.0	5-15	0	4.0-16.0	30-60

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Threesee-----	0-3	10-18	5.0-10	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	3-14	10-20	5.0-10	---	7.9-8.4	10-20	0	0.0-2.0	1-5
	14-46	4-10	1.0-5.0	---	8.5-9.0	20-30	0	0.0-2.0	5-12
	46-60	2-8	1.0-5.0	---	8.5-9.0	10-20	0	0.0-2.0	5-12
1480:									
Tulase-----	0-2	8-18	10-15	---	7.9-8.4	5-10	0	0.0-2.0	0
	2-60	8-18	5.0-15	---	7.9-9.0	10-15	0	0.0-2.0	1-5
Linoyer-----	0-9	12-18	5.0-15	---	7.9-9.0	5-20	0	0.0-2.0	0
	9-60	12-18	5.0-15	---	7.9-9.0	10-30	0	0.0-2.0	0
1500:									
Tocole-----	0-5	5-18	3.0-10	---	8.5-9.6	5-25	0	0.0-4.0	5-12
	5-44	5-18	2.0-10	---	8.5-9.6	10-40	0	4.0-8.0	15-35
	44-61	8-18	2.0-10	---	8.5-9.6	10-40	1-2	16.0-32.0	15-35
Loray-----	0-12	10-15	5.0-15	---	7.4-8.4	5-15	0	0.0-4.0	1-5
	12-60	0-8	1.0-8.0	---	7.9-9.0	5-20	0	0.0-4.0	5-12
1510:									
Izamatch-----	0-3	8-18	5.0-15	---	7.9-9.0	20-30	0	0.0-2.0	0-5
	3-13	8-18	5.0-15	---	8.5-9.0	20-30	0	0.0-2.0	0-5
	13-22	0-8	1.0-10	---	7.9-9.6	20-30	0	0.0-2.0	5-12
	22-60	0-8	1.0-10	---	8.5-9.6	30-40	0	0.0-4.0	13-30
Cliffdown-----	0-6	10-18	5.0-10	---	8.5-9.0	15-40	0	0.0-2.0	1-5
	6-60	8-18	5.0-10	---	8.5-9.0	15-40	0	8.0-16.0	5-12
1520:									
Izamatch-----	0-3	8-18	5.0-15	---	7.9-9.0	20-30	0	0.0-2.0	0-5
	3-13	8-18	5.0-15	---	8.5-9.0	20-30	0	0.0-2.0	0-5
	13-22	0-8	1.0-10	---	7.9-9.6	20-30	0	0.0-2.0	5-12
	22-60	0-8	1.0-10	---	8.5-9.6	30-40	0	0.0-4.0	13-30
Izamatch-----	0-3	8-18	5.0-15	---	7.9-9.0	20-30	0	0.0-2.0	0-5
	3-13	8-18	5.0-15	---	8.5-9.0	20-30	0	0.0-2.0	0-5
	13-22	0-8	1.0-10	---	7.9-9.6	20-30	0	0.0-2.0	5-12
	22-60	0-8	1.0-10	---	8.5-9.6	30-40	0	0.0-4.0	13-30
Luning-----	0-3	3-10	1.0-7.0	---	7.4-9.0	1-10	0	0.0-2.0	1-5
	3-60	3-10	1.0-7.0	---	7.9-9.0	1-10	0	0.0-4.0	5-12
1521:									
Izamatch-----	0-3	8-18	5.0-15	---	7.9-9.0	20-30	0	0.0-2.0	0-5
	3-13	8-18	5.0-15	---	8.5-9.0	20-30	0	0.0-2.0	0-5
	13-22	0-8	1.0-10	---	7.9-9.6	20-30	0	0.0-2.0	5-12
	22-60	0-8	1.0-10	---	8.5-9.6	30-40	0	0.0-4.0	13-30
Izamatch-----	0-3	8-18	5.0-15	---	7.9-9.0	20-30	0	0.0-2.0	0-5
	3-13	8-18	5.0-15	---	8.5-9.0	20-30	0	0.0-2.0	0-5
	13-22	0-8	1.0-10	---	7.9-9.6	20-30	0	0.0-2.0	5-12
	22-60	0-8	1.0-10	---	8.5-9.6	30-40	0	0.0-4.0	13-30
Theriot-----	0-7	8-15	5.0-10	---	7.9-9.6	40-60	0	0.0-4.0	1-5
	7-18	5-14	1.0-10	---	7.9-9.6	40-60	0	0.0-4.0	1-5
	18-22	---	---	---	---	---	---	---	---
1522:									
Izamatch-----	0-3	8-18	5.0-15	---	7.9-9.0	20-30	0	0.0-2.0	0-5
	3-13	8-18	5.0-15	---	8.5-9.0	20-30	0	0.0-2.0	0-5
	13-22	0-8	1.0-10	---	7.9-9.6	20-30	0	0.0-2.0	5-12
	22-60	0-8	1.0-10	---	8.5-9.6	30-40	0	0.0-4.0	13-30
Smaug-----	0-13	8-12	0.0-5.0	---	7.9-9.0	15-30	0	2.0-4.0	5-12
	13-60	10-18	5.0-10	---	7.9-9.0	15-35	0	8.0-16.0	31-45

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

[illegible]

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
1542: Kyler-----	0-3 3-7 7-11	7-18 7-18 ---	3.0-10 3.0-10 ---	--- --- ---	7.9-9.0 7.9-9.0 ---	30-40 30-40 ---	0 0 ---	0.0-2.0 0.0-2.0 ---	1-5 1-5 ---
Amtoft-----	0-2 2-12 12-16	15-25 12-27 ---	10-20 10-20 ---	--- --- ---	7.9-9.0 7.9-9.0 ---	10-20 30-40 ---	0 0 ---	0.0-2.0 0.0-2.0 ---	0 0 ---
Jericho-----	0-4 4-14 14-28 28-60	15-20 10-18 --- 2-4	10-20 10-15 --- 1.0-5.0	--- --- --- ---	7.9-9.0 7.9-9.0 --- 7.9-9.0	15-25 20-30 --- 15-30	0 0 --- 0	0.0-2.0 0.0-2.0 --- 0.0-2.0	0-5 0-5 --- 0-5
1550: Jericho-----	0-4 4-14 14-28 28-60	15-20 10-18 --- 2-4	10-20 10-15 --- 1.0-5.0	--- --- --- ---	7.9-9.0 7.9-9.0 --- 7.9-9.0	15-25 20-30 --- 15-30	0 0 --- 0	0.0-2.0 0.0-2.0 --- 0.0-2.0	0-5 0-5 --- 0-5
Jericho-----	0-4 4-14 14-28 28-60	15-20 10-18 --- 2-4	10-20 10-15 --- 1.0-5.0	--- --- --- ---	7.9-9.0 7.9-9.0 --- 7.9-9.0	15-25 20-30 --- 15-30	0 0 --- 0	0.0-2.0 0.0-2.0 --- 0.0-2.0	0-5 0-5 --- 0-5
1560: Toano-----	0-9 9-27 27-60	8-15 8-15 8-15	10-20 5.0-15 5.0-15	--- --- ---	7.9-9.0 7.9-9.0 7.9-9.0	10-20 15-30 15-30	0 0-1 0-1	0.0-2.0 0.0-4.0 8.0-16.0	0 0-2 1-12
Timpie-----	0-8 8-19 19-60	5-20 18-27 18-27	4.0-15 10-15 10-15	--- --- ---	8.5-9.0 8.5-9.6 8.5-9.6	15-40 15-40 15-40	0 0 0	0.0-4.0 4.0-8.0 16.0-32.0	5-13 13-50 13-50
1570: Jericho-----	0-4 4-14 14-28 28-60	15-20 10-18 --- 2-4	10-20 10-15 --- 1.0-5.0	--- --- --- ---	7.9-9.0 7.9-9.0 --- 7.9-9.0	15-25 20-30 --- 15-30	0 0 --- 0	0.0-2.0 0.0-2.0 --- 0.0-2.0	0-5 0-5 --- 0-5
Xeric Torriorthents--	0-5 5-60	8-15 2-8	5.0-15 1.0-10	--- ---	8.5-9.0 8.5-9.0	1-10 1-10	0 0	0.0-2.0 0.0-2.0	0-5 0-5
1580: Armespan-----	0-7 7-21 21-32 32-60	10-18 12-18 10-18 5-10	5.0-15 5.0-15 5.0-15 1.0-10	--- --- --- ---	7.9-9.0 7.9-9.0 7.9-9.0 7.9-9.0	5-10 5-10 10-35 10-35	0 0 0 0	2.0-4.0 8.0-16.0 8.0-16.0 2.0-4.0	1-5 1-5 5-12 5-12
Jericho-----	0-4 4-14 14-28 28-60	15-20 10-18 --- 2-4	10-20 10-15 --- 1.0-5.0	--- --- --- ---	7.9-9.0 7.9-9.0 --- 7.9-9.0	15-25 20-30 --- 15-30	0 0 --- 0	0.0-2.0 0.0-2.0 --- 0.0-2.0	0-5 0-5 --- 0-5
1581: Armespan-----	0-7 7-21 21-32 32-60	10-18 12-18 10-18 5-10	5.0-15 5.0-15 5.0-15 1.0-10	--- --- --- ---	7.9-9.0 7.9-9.0 7.9-9.0 7.9-9.0	5-10 5-10 10-35 10-35	0 0 0 0	2.0-4.0 8.0-16.0 8.0-16.0 2.0-4.0	1-5 1-5 5-12 5-12
Kyler-----	0-3 3-7 7-11	7-18 7-18 ---	3.0-10 3.0-10 ---	--- --- ---	7.9-9.0 7.9-9.0 ---	30-40 30-40 ---	0 0 ---	0.0-2.0 0.0-2.0 ---	1-5 1-5 ---

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Heist-----	0-4	8-18	5.0-15	---	7.9-9.0	5-20	0	0.0-2.0	0-5
	4-40	8-18	5.0-15	---	7.9-9.0	5-20	0	2.0-4.0	5-13
	40-60	8-18	5.0-10	---	7.9-9.0	5-20	0	2.0-4.0	5-13
1582:									
Armespan-----	0-7	10-18	5.0-15	---	7.9-9.0	5-10	0	2.0-4.0	1-5
	7-21	12-18	5.0-15	---	7.9-9.0	5-10	0	8.0-16.0	1-5
	21-32	10-18	5.0-15	---	7.9-9.0	10-35	0	8.0-16.0	5-12
	32-60	5-10	1.0-10	---	7.9-9.0	10-35	0	2.0-4.0	5-12
Xeric Torriorthents--	0-5	8-15	5.0-15	---	8.5-9.0	1-10	0	0.0-2.0	0-5
	5-60	2-8	1.0-10	---	8.5-9.0	1-10	0	0.0-2.0	0-5
1590:									
Luning-----	0-3	8-15	1.0-5.0	---	7.4-9.0	1-10	0	0.0-2.0	1-5
	3-60	3-10	1.0-5.0	---	7.9-9.0	1-10	0	0.0-4.0	5-12
Luning-----	0-3	3-10	1.0-7.0	---	7.4-9.0	1-10	0	0.0-2.0	1-5
	3-60	3-10	1.0-7.0	---	7.9-9.0	1-10	0	0.0-4.0	5-12
Loray-----	0-12	10-20	5.0-15	---	7.9-9.0	5-15	0	0.0-2.0	1-5
	12-60	0-8	1.0-8.0	---	7.9-9.0	5-20	0	0.0-4.0	5-12
1591:									
Luning-----	0-3	8-15	1.0-10	---	7.4-9.0	1-10	0	0.0-4.0	1-5
	3-60	3-10	1.0-5.0	---	7.9-9.0	1-10	0	0.0-4.0	5-12
Izamatch-----	0-3	8-18	5.0-15	---	7.9-9.0	20-30	0	0.0-2.0	0-5
	3-13	8-18	5.0-15	---	8.5-9.0	20-30	0	0.0-2.0	0-5
	13-22	0-8	1.0-10	---	7.9-9.6	20-30	0	0.0-2.0	5-12
	22-60	0-8	1.0-10	---	8.5-9.6	30-40	0	0.0-4.0	13-30
Badland-----	0-6	35-70	20-40	---	7.4-9.6	1-5	1-10	0.0-32.0	0-99
	6-60	35-70	20-40	---	7.4-9.6	1-10	1-15	0.0-32.0	0-99
1600:									
Eaglepass-----	0-1	8-18	3.0-10	---	7.9-9.0	20-40	0	0.0-2.0	0-5
	1-5	8-18	3.0-10	---	7.9-9.0	20-40	0	0.0-2.0	0-5
	5-9	---	---	---	---	---	---	---	---
Amtoft-----	0-4	15-25	10-20	---	7.9-9.0	10-20	0	0.0-2.0	0
	4-15	12-27	10-20	---	7.9-9.0	30-40	0	0.0-2.0	0
	15-25	---	---	---	---	---	---	---	---
1610:									
Xeric Torriorthents--	0-5	8-15	5.0-15	---	8.5-9.0	1-10	0	0.0-2.0	0-5
	5-60	2-8	1.0-10	---	8.5-9.0	1-10	0	0.0-2.0	0-5
Armespan-----	0-7	10-18	5.0-15	---	7.9-9.0	5-10	0	2.0-4.0	1-5
	7-21	12-18	5.0-15	---	7.9-9.0	5-10	0	8.0-16.0	1-5
	21-32	10-18	5.0-15	---	7.9-9.0	10-35	0	8.0-16.0	5-12
	32-60	5-10	1.0-10	---	7.9-9.0	10-35	0	2.0-4.0	5-12
Badland-----	0-60	0-0	---	---	---	---	---	0	---
1620:									
Kolda-----	0-10	10-20	26-42	---	7.9-9.6	1-10	0	0.0-2.0	0-12
	10-15	20-27	18-28	---	7.9-9.6	5-15	0	0.0-2.0	0-12
	15-36	40-50	24-32	---	8.5-9.6	5-15	0	4.0-8.0	5-12
	36-60	40-50	24-30	---	8.5-9.6	10-40	0	4.0-8.0	5-12
Duffer-----	0-25	15-20	10-20	---	7.9-9.6	20-40	1-2	4.0-16.0	31-45
	25-60	20-35	10-20	---	7.9-9.6	40-60	1-2	16.0-32.0	46-90

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Sonoma-----	0-6	27-35	15-25	---	8.5-9.6	3-12	0	2.0-4.0	1-5
	6-48	20-35	15-20	---	7.9-9.6	3-12	0	0.0-2.0	5-12
	48-60	40-50	25-30	---	7.9-9.6	3-12	0	0.0-2.0	5-12
1621: Kolda-----	0-6	10-20	35-50	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	6-15	20-27	20-35	---	7.9-8.4	5-15	0	0.0-2.0	1-5
	15-36	40-50	25-30	---	8.5-9.0	5-15	1-2	4.0-8.0	1-5
	36-60	40-50	30-45	---	8.5-9.0	10-40	1-2	4.0-8.0	1-5
Rubylake-----	0-7	27-35	15-30	---	8.5-9.6	30-40	0	16.0-32.0	5-12
	7-23	18-27	15-20	---	8.5-9.6	40-50	0	2.0-8.0	1-5
	23-55	18-27	15-20	---	8.5-9.6	40-50	0-1	2.0-8.0	1-5
	55-60	25-35	15-25	---	8.5-9.6	50-70	1-2	2.0-4.0	1-5
Kolda-----	0-10	10-20	26-42	---	7.9-9.6	1-10	0	0.0-2.0	0-12
	10-15	20-27	18-28	---	7.9-9.6	5-15	0	0.0-2.0	0-12
	15-36	40-50	24-32	---	8.5-9.6	5-15	0	4.0-8.0	5-12
	36-60	40-50	24-30	---	8.5-9.6	10-40	0	4.0-8.0	5-12
1622: Kolda-----	0-10	10-20	26-42	---	7.9-9.6	1-10	0	0.0-2.0	0-12
	10-15	20-27	18-28	---	7.9-9.6	5-15	0	0.0-2.0	0-12
	15-36	40-50	24-32	---	8.5-9.6	5-15	0	4.0-8.0	5-12
	36-60	40-50	24-30	---	8.5-9.6	10-40	0	4.0-8.0	5-12
1623: Kolda-----	0-10	10-20	26-42	---	7.9-9.6	1-10	0	0.0-2.0	0-12
	10-15	20-27	18-28	---	7.9-9.6	5-15	0	0.0-2.0	0-12
	15-36	40-50	24-32	---	8.5-9.6	5-15	0	4.0-8.0	5-12
	36-60	40-50	24-30	---	8.5-9.6	10-40	0	4.0-8.0	5-12
Water-----	---	---	---	---	---	---	---	---	---
1630: Pookaloo-----	0-2	10-18	10-20	---	7.9-8.4	20-30	0	0	0
	2-14	10-18	10-20	---	7.9-8.4	30-50	0	0	0
	14-18	---	---	---	---	---	---	---	---
Cavehill-----	0-12	18-27	15-30	---	7.9-9.0	10-20	0	0	0
	12-30	18-27	10-20	---	7.9-9.0	30-50	0	0.0-2.0	0
	30-34	---	---	---	---	---	---	---	---
Rock Outcrop---	---	---	---	---	---	---	---	---	---
1631: Pookaloo-----	0-2	10-18	10-20	---	7.9-8.4	20-30	0	0	0
	2-14	10-18	10-20	---	7.9-8.4	30-50	0	0	0
	14-18	---	---	---	---	---	---	---	---
Tecomar-----	0-2	18-27	10-20	---	7.9-9.0	10-30	0	0.0-2.0	0
	2-14	20-27	5.0-15	---	7.9-9.0	20-40	0	0.0-2.0	1-5
	14-18	---	---	---	---	---	---	---	---
Wardbay-----	0-14	18-27	25-35	---	7.4-8.4	40-60	0	0	0
	14-55	18-27	5.0-15	---	7.9-8.4	40-60	0	0	0
	55-59	---	---	---	---	---	---	---	---
1640: Jungo-----	0-3	16-24	20-30	---	7.4-8.4	0-5	0	0.0-2.0	0-5
	3-20	27-35	30-40	---	7.9-9.0	1-10	1-5	0.0-4.0	0-10
	20-60	27-35	30-40	---	7.9-9.0	10-15	1-5	0.0-4.0	1-12
Jungo-----	0-3	16-24	20-30	---	7.4-8.4	0-5	0	0.0-2.0	0-5
	3-20	27-35	30-40	---	7.9-9.0	1-10	1-5	0.0-4.0	0-10
	20-60	27-35	30-40	---	7.9-9.0	10-15	1-5	0.0-4.0	1-12

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
1650:									
Shantown-----	0-2	2-8	5.0-15	---	6.6-7.8	0	0	0	0
	2-11	2-8	5.0-15	---	6.6-7.8	0	0	0	0
	11-33	8-12	5.0-10	---	7.4-7.8	0	0	0	0
	33-49	2-8	2.0-10	---	7.4-7.8	0-5	0	0	0
	49-60	2-6	0.0-5.0	---	7.9-8.4	1-10	0	0.0-4.0	0
Zorravista-----	0-6	0-5	0.0-5.0	---	7.9-9.0	1-10	0	0	0
	6-60	0-5	0.0-5.0	---	7.4-9.0	1-10	0	0	0
1651:									
Shantown-----	0-2	2-8	5.0-15	---	6.6-7.8	0	0	0	0
	2-11	2-8	5.0-15	---	6.6-7.8	0	0	0	0
	11-33	8-12	5.0-10	---	7.4-7.8	0	0	0	0
	33-49	2-8	2.0-10	---	7.4-7.8	0-5	0	0	0
	49-60	2-6	0.0-5.0	---	7.9-8.4	1-10	0	0.0-4.0	0
Shantown-----	0-2	2-8	5.0-15	---	6.6-7.8	0	0	0	0
	2-11	2-8	5.0-15	---	6.6-7.8	0	0	0	0
	11-33	8-12	5.0-10	---	7.4-7.8	0	0	0	0
	33-49	2-8	2.0-10	---	7.4-7.8	0-5	0	0	0
	49-60	2-6	0.0-5.0	---	7.9-8.4	1-10	0	0.0-4.0	0
1660:									
Wendane-----	0-8	15-25	15-25	---	8.5-9.6	5-15	0	16.0-50.0	13-99
	8-42	15-25	15-25	---	7.9-9.6	5-15	0	16.0-32.0	1-12
	42-60	27-35	25-40	---	7.9-9.6	5-15	0	16.0-32.0	1-5
Logan-----	0-10	10-20	10-20	---	7.9-9.0	25-35	0	0.0-2.0	1-5
	10-40	25-35	20-35	---	7.9-9.0	35-40	0	0.0-2.0	1-5
	40-60	35-45	30-40	---	7.9-9.0	20-25	0	0.0-2.0	1-5
1670:									
Wendane-----	0-8	15-25	15-25	---	8.5-9.6	5-15	0	16.0-32.0	46-99
	8-42	15-25	15-25	---	7.9-9.6	5-15	0	16.0-32.0	1-12
	42-60	27-35	25-40	---	7.9-9.6	5-15	0	16.0-32.0	1-5
Logan-----	0-10	10-20	10-20	---	7.9-9.0	25-35	0	0.0-2.0	1-5
	10-40	25-35	20-35	---	7.9-9.0	35-40	0	0.0-2.0	1-5
	40-60	35-45	30-40	---	7.9-9.0	20-25	0	0.0-2.0	1-5
Wendane-----	0-8	15-25	15-25	---	8.5-9.6	5-15	0	16.0-50.0	13-99
	8-42	15-25	15-25	---	7.9-9.6	5-15	0	16.0-32.0	1-12
	42-60	27-35	25-40	---	7.9-9.6	5-15	0	16.0-32.0	1-5
1680:									
Rubylake-----	0-7	27-35	15-30	---	8.5-9.6	30-40	0	16.0-32.0	5-12
	7-23	18-27	15-20	---	8.5-9.6	40-50	0	2.0-8.0	1-5
	23-55	18-27	15-20	---	8.5-9.6	40-50	0-1	2.0-8.0	1-5
	55-60	25-35	15-25	---	8.5-9.6	50-70	1-2	2.0-4.0	1-5
Kolda-----	0-6	10-20	35-50	---	7.9-8.4	1-10	0	0.0-2.0	1-5
	6-15	20-27	20-35	---	7.9-8.4	5-15	0	0.0-2.0	1-5
	15-36	40-50	25-30	---	8.5-9.0	5-15	1-2	4.0-8.0	1-5
	36-60	40-50	30-45	---	8.5-9.0	10-40	1-2	4.0-8.0	1-5
Wendane-----	0-8	15-25	15-25	---	8.5-9.6	5-15	0	16.0-32.0	46-99
	8-42	15-25	15-25	---	7.9-9.6	5-15	0	16.0-32.0	1-12
	42-60	27-35	25-40	---	7.9-9.6	5-15	0	16.0-32.0	1-5
1681:									
Wendane-----	0-8	15-25	15-25	---	8.5-9.6	5-15	0	16.0-32.0	46-99
	8-42	15-25	15-25	---	7.9-9.6	5-15	0	16.0-32.0	1-12
	42-60	27-35	25-40	---	7.9-9.6	5-15	0	16.0-32.0	1-5

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Logan-----	0-10	10-20	10-20	---	7.9-9.0	25-35	0	0.0-2.0	1-5
	10-40	25-35	20-35	---	7.9-9.0	35-40	0	0.0-2.0	1-5
	40-60	35-45	30-40	---	7.9-9.0	20-25	0	0.0-2.0	1-5
Umberland-----	0-15	18-27	12-18	---	9.1-9.6	10-25	0	16.0-32.0	46-90
	15-60	35-50	22-32	---	8.5-9.6	10-25	1-5	4.0-16.0	46-90
1690: Krenka-----	0-17	10-15	15-25	---	6.6-7.3	0	0	0	0
	17-31	20-25	20-25	---	6.6-7.3	0	0	0	0
	31-60	20-25	15-20	---	6.1-7.3	0	0	0	0
Secrepass-----	0-7	10-18	15-25	---	6.1-7.3	0	0	0	0
	7-14	30-40	25-35	---	6.1-7.3	0	0	0	0
	14-31	40-60	30-45	---	6.1-7.3	0	0	0	0
	31-60	10-18	5.0-15	---	6.1-7.3	0	0	0	0
1700: Heechee-----	0-7	15-27	15-25	---	6.1-7.3	0	0	0	0
	7-20	25-35	20-30	---	6.6-7.3	0	0	0	0
	20-60	10-25	10-15	---	6.1-7.3	0	0	0	0
Rubicity-----	0-3	10-18	15-20	---	6.1-7.3	0	0	0	0
	3-42	10-18	15-20	---	6.1-7.3	0	0	0	0
	42-60	10-18	10-15	---	6.1-7.3	0	0	0	0
Heechee-----	0-7	10-20	10-20	---	6.1-7.3	0	0	0	0
	7-30	25-35	20-30	---	6.6-7.3	0	0	0	0
	30-60	10-25	10-15	---	6.1-7.3	0	0	0	0
1702: Heechee-----	0-7	15-27	15-25	---	6.6-7.3	0	0	0	0
	7-20	25-35	20-30	---	6.6-7.3	0	0	0	0
	20-60	10-25	10-15	---	6.6-7.3	0	0	0	0
McIvey-----	0-12	20-27	15-30	---	6.6-7.3	0	0	0	0
	12-18	30-40	20-30	---	6.1-7.3	0	0	0	0
	18-60	40-50	25-30	---	6.1-7.3	0	0	0	0
Rubicity-----	0-3	10-18	15-20	---	6.1-7.3	0	0	0	0
	3-42	10-18	15-20	---	6.1-7.3	0	0	0	0
	42-60	10-18	10-15	---	6.1-7.3	0	0	0	0
1710: James Canyon----	0-8	10-15	10-20	---	6.1-8.4	0	0	0.0-2.0	0
	8-33	18-27	20-30	---	6.1-8.4	0	0	0.0-2.0	0
	33-60	10-15	10-15	---	6.1-8.4	0	0	0.0-2.0	0
Wendane-----	0-8	15-25	15-25	---	8.5-9.6	5-15	0	16.0-32.0	46-99
	8-42	15-25	15-25	---	7.9-9.6	5-15	0	16.0-32.0	1-12
	42-60	27-35	25-40	---	7.9-9.6	5-15	0	16.0-32.0	1-5
1711: James Canyon----	0-8	10-15	10-20	---	6.1-8.4	0	0	0.0-2.0	0
	8-33	18-27	20-30	---	6.1-8.4	0	0	0.0-2.0	0
	33-60	10-15	10-15	---	6.1-8.4	0	0	0.0-2.0	0
Wendane-----	0-8	15-25	15-25	---	8.5-9.6	5-15	0	16.0-32.0	46-99
	8-42	15-25	15-25	---	7.9-9.6	5-15	0	16.0-32.0	1-12
	42-60	27-35	25-40	---	7.9-9.6	5-15	0	16.0-32.0	1-5
Wendane-----	0-8	15-25	15-25	---	8.5-9.6	5-15	0	16.0-50.0	13-99
	8-42	15-25	15-25	---	7.9-9.6	5-15	0	16.0-32.0	1-12
	42-60	27-35	25-40	---	7.9-9.6	5-15	0	16.0-32.0	1-5

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
1720: Welch-----	0-8 8-60	15-20 27-35	25-30 25-35	--- ---	6.1-7.3 6.1-7.8	0 0	0 0	0 0	0 0
1721: Welch-----	0-8 8-60	15-20 27-35	25-30 25-35	--- ---	6.1-7.3 6.1-7.8	0 0	0 0	0 0	0 0
Welsum-----	0-11 11-25 25-60	20-27 27-35 0-5	15-25 20-30 0.0-10	--- --- ---	7.4-8.4 7.4-8.4 7.4-8.4	5-10 5-10 0-5	0 0 0	0.0-2.0 0.0-2.0 0.0-2.0	0 0 0
1722: Welch-----	0-5 5-41 41-61	15-20 27-35 5-14	15-25 25-35 5.0-10	--- --- ---	6.1-7.3 6.1-7.8 6.6-7.8	0 0 0	0 0 0	0 0 0	0 0 0
Slipback-----	0-12 12-39 39-55 55-60	12-18 25-35 12-18 2-8	10-20 15-25 10-15 5.0-10	--- --- --- ---	7.9-8.4 7.9-9.0 7.9-9.0 7.9-9.0	0 1-5 1-5 1-5	0 0 1-5 1-5	0.0-2.0 0.0-8.0 0.0-4.0 0.0-4.0	1-5 13-45 13-30 1-12
Welch-----	0-5 5-41 41-61	15-20 27-35 5-14	15-25 25-35 5.0-10	--- --- ---	6.1-7.3 6.1-7.8 6.6-7.8	0 0 0	0 0 0	0 0 0	0 0 0
1723: Welch-----	0-8 8-60	15-20 27-35	25-30 25-35	--- ---	6.1-7.3 6.1-7.8	0 0	0 0	0 0	0 0
Welch-----	0-8 8-60	15-20 27-35	15-20 25-35	--- ---	6.1-7.3 6.1-7.8	0 0	0 0	0 0	0 0
1730: McIvey-----	0-12 12-18 18-60	20-27 30-40 40-50	15-30 20-30 25-30	--- --- ---	6.6-7.3 6.1-7.3 6.1-7.3	0 0 0	0 0 0	0 0 0	0 0 0
Donna-----	0-7 7-33 33-43 43-60	15-25 60-70 --- 15-25	15-25 45-55 --- 10-15	--- --- --- ---	6.1-7.3 6.6-7.3 --- 7.4-8.4	0 0 --- 0-5	0 0 --- 0	0 0 --- 0.0-4.0	0 0 --- 0
1731: McIvey-----	0-12 12-18 18-60	20-27 30-40 40-50	15-30 20-30 25-30	--- --- ---	6.6-7.3 6.1-7.3 6.1-7.3	0 0 0	0 0 0	0 0 0	0 0 0
Chen-----	0-3 3-16 16-20	20-27 40-55 ---	15-25 25-40 ---	--- --- ---	6.1-7.8 6.1-7.8 ---	0 0 ---	0 0 ---	0 0 ---	0 0 ---
Donna-----	0-7 7-33 33-43 43-60	15-25 60-70 --- 15-25	15-25 45-55 --- 10-15	--- --- --- ---	6.1-7.3 6.6-7.3 --- 7.4-8.4	0 0 --- 0-5	0 0 --- 0	0 0 --- 0.0-4.0	0 0 --- 0
1732: McIvey-----	0-12 12-18 18-60	20-27 30-40 40-50	15-25 20-30 25-35	--- --- ---	6.6-7.3 6.1-7.3 6.1-7.3	0 0 0	0 0 0	0 0 0	0 0 0
Stampede-----	0-11 11-35 35-45	20-25 40-55 ---	15-25 25-35 ---	--- --- ---	6.1-7.3 6.6-7.8 ---	0 0 ---	0 0 ---	0 0 ---	0 0 ---

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Heechee-----	0-7	15-27	15-25	---	6.6-7.3	0	0	0	0
	7-20	25-35	20-30	---	6.6-7.3	0	0	0	0
	20-60	10-25	10-15	---	6.6-7.3	0	0	0	0
1740: Slipback-----	0-12	12-18	10-20	---	7.9-8.4	0	0	0.0-2.0	1-5
	12-39	25-35	15-25	---	7.9-9.0	1-5	0	0.0-8.0	13-45
	39-55	12-18	10-15	---	7.9-9.0	1-5	1-5	0.0-4.0	13-30
	55-60	2-8	5.0-10	---	7.9-9.0	1-5	1-5	0.0-4.0	1-12
Welch-----	0-5	15-20	15-25	---	6.1-7.3	0	0	0	0
	5-41	27-35	25-35	---	6.1-7.8	0	0	0	0
	41-61	5-14	5.0-10	---	6.6-7.8	0	0	0	0
1741: Slipback-----	0-12	12-18	10-20	---	7.9-8.4	0	0	0.0-2.0	1-5
	12-39	25-35	15-25	---	7.9-9.0	1-5	0	0.0-8.0	13-45
	39-55	12-18	10-15	---	7.9-9.0	1-5	1-5	0.0-4.0	13-30
	55-60	2-8	5.0-10	---	7.9-9.0	1-5	1-5	0.0-4.0	1-12
Shantown-----	0-2	2-8	5.0-15	---	6.6-7.8	0	0	0	0
	2-11	2-8	5.0-15	---	6.6-7.8	0	0	0	0
	11-33	8-12	5.0-10	---	7.4-7.8	0	0	0	0
	33-49	2-8	2.0-10	---	7.4-7.8	0-5	0	0	0
	49-60	2-6	0.0-5.0	---	7.9-8.4	1-10	0	0.0-4.0	0
Toba-----	0-4	20-27	15-30	---	8.5-9.0	5-10	0	0.0-2.0	5-12
	4-14	27-35	15-35	---	8.5-9.0	15-25	0	0.0-2.0	13-45
	14-23	2-6	1.0-5.0	---	8.5-9.0	5-10	0	0.0-2.0	13-45
	23-60	0-4	1.0-5.0	---	7.9-8.4	1-5	0-1	0.0-2.0	13-45
1750: Heechee-----	0-7	15-27	15-25	---	6.6-7.3	0	0	0	0
	7-20	25-35	20-30	---	6.1-7.3	0	0	0	0
	20-60	10-20	10-15	---	6.1-7.3	0	0	0	0
Welch-----	0-8	15-20	25-30	---	6.1-7.3	0	0	0	0
	8-60	27-35	25-35	---	6.1-7.8	0	0	0	0
Welch-----	0-8	15-20	15-20	---	6.1-7.3	0	0	0	0
	8-60	27-35	25-35	---	6.1-7.8	0	0	0	0
1760: Lykal-----	0-12	12-18	10-15	---	8.5-9.0	35-45	0	0.0-2.0	5-12
	12-41	12-18	10-15	---	7.9-9.0	60-70	0	0.0-2.0	5-12
	41-51	12-18	5.0-10	---	7.4-8.4	35-45	0	0.0-2.0	1-5
	51-60	20-27	10-15	---	7.4-8.4	35-45	0	0.0-2.0	1-5
Wendane-----	0-8	15-25	15-25	---	8.5-9.6	5-15	0	16.0-50.0	13-99
	8-42	15-25	15-25	---	7.9-9.6	5-15	0	16.0-32.0	1-12
	42-60	27-35	25-40	---	7.9-9.6	5-15	0	16.0-32.0	1-5
James Canyon---	0-8	10-15	10-20	---	6.1-8.4	0	0	0.0-2.0	0
	8-33	18-27	20-30	---	6.1-8.4	0	0	0.0-2.0	0
	33-60	10-15	10-15	---	6.1-8.4	0	0	0.0-2.0	0
1770: Donna-----	0-7	15-25	15-25	---	6.1-7.3	0	0	0	0
	7-33	60-70	45-55	---	6.6-7.3	0	0	0	0
	33-43	---	---	---	---	---	---	---	---
	43-60	15-25	10-15	---	7.4-8.4	0-5	0	0.0-4.0	0
McIvey-----	0-12	20-27	15-30	---	6.6-7.3	0	0	0	0
	12-18	30-40	20-30	---	6.1-7.3	0	0	0	0
	18-60	40-50	25-30	---	6.1-7.3	0	0	0	0

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
Heechee-----	0-7	15-27	15-25	---	6.6-7.3	0	0	0	0
	7-30	25-35	20-30	---	6.6-7.3	0	0	0	0
	30-60	10-25	10-15	---	6.6-7.3	0	0	0	0
1780:									
Schoer-----	0-3	20-27	15-25	---	6.6-7.8	0	0	0	0
	3-16	35-45	25-40	---	7.4-8.4	0	0	0	0
	16-23	27-40	25-35	---	7.4-8.4	0	0	0	0
	23-33	25-35	20-30	---	7.4-8.4	0	0	0	0
	33-60	2-8	1.0-5.0	---	7.4-8.4	0-5	0	0	0
Welch-----	0-8	15-20	25-30	---	6.1-7.3	0	0	0	0
	8-60	27-35	25-35	---	6.1-7.8	0	0	0	0
1790:									
Donna-----	0-7	15-25	15-25	---	6.1-7.3	0	0	0	0
	7-33	60-70	45-55	---	6.6-7.3	0	0	0	0
	33-43	---	---	---	---	---	---	---	---
	43-60	15-25	10-15	---	7.4-8.4	0-5	0	0.0-4.0	0
Krenka-----	0-17	10-15	15-25	---	6.6-7.3	0	0	0	0
	17-31	20-25	20-25	---	6.6-7.3	0	0	0	0
	31-60	20-25	15-20	---	6.6-7.3	0	0	0	0
McIvey-----	0-12	20-27	15-30	---	6.6-7.3	0	0	0	0
	12-18	30-40	20-30	---	6.1-7.3	0	0	0	0
	18-60	40-50	25-30	---	6.1-7.3	0	0	0	0
1800:									
Chen-----	0-3	20-27	15-25	---	6.1-7.8	0	0	0	0
	3-16	40-55	25-40	---	6.1-7.8	0	0	0	0
	16-20	---	---	---	---	---	---	---	---
Graley-----	0-7	10-20	10-20	---	6.6-7.8	0	0	0	0
	7-19	35-45	20-35	---	6.6-7.8	0	0	0	0
	19-23	---	---	---	---	---	---	---	---
Rock Outcrop----	---	---	---	---	---	---	---	---	---
1810:									
Sumine-----	0-9	10-20	20-30	---	6.6-7.8	0	0	0	0
	9-23	25-35	20-30	---	6.6-7.8	0	0	0	0
	23-27	---	---	---	---	---	---	---	---
Tusel-----	0-17	10-20	10-25	---	6.1-7.3	0	0	0	0
	17-60	25-35	15-35	---	6.1-7.3	0	0	0	0
Hapgood-----	0-8	15-25	15-25	---	6.1-7.3	0	0	0	0
	8-36	18-27	15-20	---	6.1-7.3	0	0	0	0
	36-50	10-15	5.0-10	---	6.1-7.3	0	0	0	0
	50-54	---	---	---	---	---	---	---	---
1820:									
Hussa-----	0-16	20-25	15-20	---	7.9-9.0	5-10	0	0.0-4.0	0
	16-60	25-35	15-25	---	7.9-9.0	1-10	0	0.0-4.0	0
Halleck-----	0-14	18-25	20-30	---	7.4-8.4	1-10	0	0.0-2.0	0
	14-41	20-35	20-35	---	7.4-8.4	1-10	0	0.0-2.0	0
	41-60	8-18	15-20	---	7.4-8.4	1-10	0	0.0-2.0	0
Walsum-----	0-11	20-27	15-25	---	7.4-8.4	5-10	0	0.0-2.0	0
	11-25	27-35	20-30	---	7.4-8.4	5-10	0	0.0-2.0	0
	25-60	0-5	0.0-10	---	7.4-8.4	0-5	0	0.0-2.0	0

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	Pct	meq/100g	meq/100g	pH	Pct	Pct	mmhos/cm	
1831:									
Enko-----	0-2	10-18	10-25	---	6.6-8.4	0	0	0.0-4.0	0-5
	2-14	10-18	10-25	---	6.6-8.4	0	0	0.0-4.0	1-12
	14-32	10-18	10-25	---	7.4-9.0	0-15	0	4.0-16.0	5-12
	32-60	10-18	10-25	---	7.9-9.6	0-5	0	4.0-16.0	13-30
Kelk-----	0-12	18-27	15-25	---	6.6-8.4	0-5	0	0.0-4.0	1-5
	12-20	18-27	20-30	---	7.4-8.4	1-5	0	0.0-8.0	5-12
	20-60	18-27	20-30	---	8.5-9.0	1-5	0	4.0-16.0	13-30
Enko-----	0-2	10-18	10-30	---	6.6-8.4	0	0	0.0-4.0	0-5
	2-14	10-18	10-25	---	6.6-8.4	0	0	0.0-4.0	1-12
	14-32	10-18	10-25	---	7.4-9.0	0-15	0	4.0-16.0	5-12
	32-60	10-18	10-25	---	7.9-9.6	0-5	0	4.0-16.0	13-30
1840:									
Amene-----	0-12	20-27	10-25	---	7.4-9.0	10-20	0	0.0-2.0	0
	12-18	18-27	10-20	---	7.9-9.0	35-45	0	0.0-2.0	0
	18-22	---	---	---	---	---	---	---	---
Belsac-----	0-21	18-25	15-25	---	6.6-7.8	0	0	0	0
	21-35	18-25	15-20	---	7.4-8.4	0-10	0	0	0
	35-39	---	---	---	---	---	---	---	---
Chen-----	0-3	20-27	15-25	---	6.1-7.8	0	0	0	0
	3-16	40-55	25-40	---	6.1-7.8	0	0	0	0
	16-20	---	---	---	---	---	---	---	---
1850:									
Bullump-----	0-10	15-25	15-30	---	6.1-7.8	0	0	0	0
	10-49	25-35	10-25	---	6.1-7.8	0	0	0	0
	49-53	---	---	---	---	---	---	---	---
Cleavage-----	0-7	15-20	15-20	---	6.6-7.8	0	0	0	0
	7-15	20-35	15-30	---	6.6-7.8	0	0	0	0
	15-19	---	---	---	---	---	---	---	---
Rock Outcrop----	---	---	---	---	---	---	---	---	---
1861:									
Equis-----	0-6	40-50	20-25	---	8.5-9.0	35-45	0	8.0-16.0	20-70
	6-24	40-50	15-25	---	8.5-9.6	45-65	1-2	8.0-16.0	5-70
	24-41	30-45	10-20	---	8.5-9.0	45-65	1-2	4.0-8.0	1-5
	41-60	20-45	10-20	---	8.5-9.0	40-60	1-2	0.0-4.0	1-5
Devilsgait-----	0-8	15-25	15-30	---	7.9-8.4	1-5	0	0.0-2.0	1-5
	8-43	20-35	15-35	---	7.9-8.4	0-5	0	0.0-2.0	1-5
	43-68	15-25	10-25	---	7.4-8.4	0-5	0	0.0-2.0	1-5
1862:									
Equis-----	0-6	40-50	20-25	---	8.5-9.0	35-45	0	8.0-16.0	20-70
	6-24	40-50	15-25	---	8.5-9.6	45-65	1-2	8.0-16.0	5-70
	24-41	30-45	10-20	---	8.5-9.0	45-65	1-2	4.0-8.0	1-5
	41-60	20-45	10-20	---	8.5-9.0	40-60	1-2	0.0-4.0	1-5
Equis-----	0-6	40-50	20-25	---	8.5-9.0	35-45	0	8.0-16.0	20-70
	6-24	40-50	15-25	---	8.5-9.6	45-65	1-2	8.0-16.0	5-70
	24-41	30-45	10-20	---	8.5-9.0	45-65	1-2	4.0-8.0	1-5
	41-60	20-45	10-20	---	8.5-9.0	40-60	1-2	0.0-4.0	1-5

TABLE 12.--CHEMICAL PROPERTIES OF THE SOILS--Continued

[illegible]

TABLE 13.--WATER FEATURES

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
53: Palinor-----	D	None	---	---	>6.0	---	---	---	---
Urmafet-----	D	None	---	---	>6.0	---	---	---	---
62: Amtoft-----	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop.									
Amtoft-----	D	None	---	---	>6.0	---	---	---	---
66: Zimbob-----	D	None	---	---	>6.0	---	---	---	---
Zimbob-----	D	None	---	---	>6.0	---	---	---	---
67: Tecomar-----	D	None	---	---	>6.0	---	---	---	---
Tecomar-----	D	None	---	---	>6.0	---	---	---	---
Pockaloo-----	D	None	---	---	>6.0	---	---	---	---
69: Zimbob-----	D	None	---	---	>6.0	---	---	---	---
Hyzen-----	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop.									
70: Stewval-----	D	None	---	---	>6.0	---	---	---	---
Eastwell-----	D	None	---	---	>6.0	---	---	---	---
71: Stewval-----	D	None	---	---	>6.0	---	---	---	---
Wesfil-----	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop.									
80: Stewval-----	D	None	---	---	>6.0	---	---	---	---
92: Wesfil-----	D	None	---	---	>6.0	---	---	---	---
Wintermute-----	C	None	---	---	>6.0	---	---	---	---
Okan-----	B	Rare	---	---	>6.0	---	---	---	---
98: Wesfil-----	D	None	---	---	>6.0	---	---	---	---
Tarnach-----	D	None	---	---	>6.0	---	---	---	---
Wesfil-----	D	None	---	---	>6.0	---	---	---	---
99: Wesfil-----	D	None	---	---	>6.0	---	---	---	---
Armespan-----	B	None	---	---	>6.0	---	---	---	---
Heist-----	B	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
100: Benin-----	D	None	---	---	>6.0	---	---	---	---
Mazuma-----	B	None	---	---	>6.0	---	---	---	---
101: Toano-----	B	None	---	---	>6.0	---	---	---	---
Linoyer-----	B	None	---	---	>6.0	---	---	---	---
103: Benin-----	D	None	---	---	>6.0	---	---	---	---
Playas-----	D	None	---	---	-1.0-1.0	Apparent	Feb-Sep	Long	1.0
111: Gravier-----	B	None	---	---	>6.0	---	---	---	---
Armespan-----	B	None	---	---	>6.0	---	---	---	---
113: Gravier-----	B	None	---	---	>6.0	---	---	---	---
Gravier-----	B	None	---	---	>6.0	---	---	---	---
Jericho-----	D	None	---	---	>5.0	---	---	---	---
116: Gravier-----	B	None	---	---	>6.0	---	---	---	---
Izamatch-----	A	None	---	---	>6.0	---	---	---	---
Loray-----	A	None	---	---	>6.0	---	---	---	---
118: Gravier-----	B	None	---	---	>6.0	---	---	---	---
Automal-----	C	None	---	---	>6.0	---	---	---	---
Zerk-----	B	None	---	---	>6.0	---	---	---	---
119: Wintermute-----	C	None	---	---	>6.0	---	---	---	---
Linoyer-----	B	None	---	---	>6.0	---	---	---	---
120: Izamatch-----	A	None	---	---	>6.0	---	---	---	---
Armespan-----	B	None	---	---	>6.0	---	---	---	---
Cliffdown-----	B	None	---	---	>6.0	---	---	---	---
122: Gravier-----	B	None	---	---	>6.0	---	---	---	---
Izamatch-----	A	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
130:									
Tooele-----	B	None	---	---	>6.0	---	---	---	---
Benin-----	D	None	---	---	>6.0	---	---	---	---
140:									
Gollaher-----	D	None	---	---	>6.0	---	---	---	---
Belsac-----	B	None	---	---	>6.0	---	---	---	---
151:									
Hopeka-----	D	None	---	---	>6.0	---	---	---	---
Amene-----	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop.									
154:									
Hopeka-----	D	None	---	---	>6.0	---	---	---	---
Tecomar-----	D	None	---	---	>6.0	---	---	---	---
160:									
Saltair-----	D	Rare	---	---	0.0-1.0	Apparent	Mar-Oct	---	---
Kawich-----	A	None	---	---	>6.0	---	---	---	---
161:									
Saltair-----	D	Rare	---	---	0.0-1.0	Apparent	Mar-Oct	---	---
Playas-----	D	None	---	---	-1.0-1.0	Apparent	Feb-Sep	Long	1.0
171:									
Loray-----	A	None	---	---	>6.0	---	---	---	---
Gravier-----	B	None	---	---	>6.0	---	---	---	---
Toano-----	B	None	---	---	>6.0	---	---	---	---
173:									
Cliffdown-----	B	None	---	---	>6.0	---	---	---	---
Armespan-----	B	None	---	---	>6.0	---	---	---	---
Izamatch-----	A	None	---	---	>6.0	---	---	---	---
174:									
Wintermute-----	C	None	---	---	>6.0	---	---	---	---
Linoyer-----	B	None	---	---	>6.0	---	---	---	---
Okan-----	B	Rare	---	---	>6.0	---	---	---	---
175:									
Loray-----	A	None	---	---	>6.0	---	---	---	---
Wintermute-----	C	None	---	---	>6.0	---	---	---	---
176:									
Loray-----	A	None	---	---	>6.0	---	---	---	---
Zerk-----	B	None	---	---	>6.0	---	---	---	---
Zerk-----	B	None	---	---	>6.0	---	---	---	---
181:									
Peeko-----	D	None	---	---	>6.0	---	---	---	---
Dewar-----	D	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
181 (cont.) Peeko-----	D	None	---	---	>6.0	---	---	---	---
182: Peeko-----	D	None	---	---	>6.0	---	---	---	---
Peeko-----	D	None	---	---	>6.0	---	---	---	---
Gance-----	C	None	---	---	>6.0	---	---	---	---
183: Peeko-----	D	None	---	---	>6.0	---	---	---	---
Enko-----	C	None	---	---	>6.0	---	---	---	---
Izar-----	D	None	---	---	>6.0	---	---	---	---
185: Peeko-----	D	None	---	---	>6.0	---	---	---	---
Peeko-----	D	None	---	---	>6.0	---	---	---	---
Chiara-----	D	None	---	---	>6.0	---	---	---	---
186: Palinor-----	D	None	---	---	>6.0	---	---	---	---
Pharo-----	B	None	---	---	>6.0	---	---	---	---
Hundraw-----	D	None	---	---	>6.0	---	---	---	---
187: Peeko-----	D	None	---	---	>6.0	---	---	---	---
Izar-----	D	None	---	---	>6.0	---	---	---	---
Izar-----	D	None	---	---	>6.0	---	---	---	---
188: Palinor-----	D	None	---	---	>6.0	---	---	---	---
Automal-----	C	None	---	---	>6.0	---	---	---	---
Izar-----	D	None	---	---	>6.0	---	---	---	---
192: Hutchley-----	D	None	---	---	>6.0	---	---	---	---
Simon-----	B	None	---	---	>6.0	---	---	---	---
201: Tecomar-----	D	None	---	---	>6.0	---	---	---	---
Hopeka-----	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop.									
203: Tecomar-----	D	None	---	---	>6.0	---	---	---	---
Pookaloo-----	D	None	---	---	>6.0	---	---	---	---
Pharo-----	B	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
210:									
Mazuma-----	B	None	---	---	>6.0	---	---	---	---
Hardhat-----	B	None	---	---	>6.0	---	---	---	---
Loray-----	A	None	---	---	>6.0	---	---	---	---
211:									
Valmy-----	B	None	---	---	>6.0	---	---	---	---
Enko-----	C	None	---	---	>6.0	---	---	---	---
230:									
Zafod-----	C	None	---	---	>6.0	---	---	---	---
Pyrat-----	B	None	---	---	>6.0	---	---	---	---
Palinor-----	D	None	---	---	>6.0	---	---	---	---
231:									
Dacker-----	C	None	---	---	>6.0	---	---	---	---
Nevador-----	B	None	---	---	>6.0	---	---	---	---
Kelk-----	C	None	---	---	>6.0	---	---	---	---
240:									
Hundraw-----	D	None	---	---	>6.0	---	---	---	---
Cobre-----	C	None	---	---	>6.0	---	---	---	---
241:									
Hundraw-----	D	None	---	---	>6.0	---	---	---	---
Peeko-----	D	None	---	---	>6.0	---	---	---	---
Kzin-----	D	None	---	---	>6.0	---	---	---	---
242:									
Cobre-----	C	None	---	---	>6.0	---	---	---	---
Hundraw-----	D	None	---	---	>6.0	---	---	---	---
Chiara-----	D	None	---	---	>6.0	---	---	---	---
244:									
Hundraw-----	D	None	---	---	>6.0	---	---	---	---
Shabliss-----	D	None	---	---	>6.0	---	---	---	---
Palinor-----	D	None	---	---	>6.0	---	---	---	---
250:									
Izar-----	D	None	---	---	>6.0	---	---	---	---
Holborn-----	C	None	---	---	>6.0	---	---	---	---
Kzin-----	D	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
251:									
Izar-----	D	None	---	---	>6.0	---	---	---	---
Palinor-----	D	None	---	---	>6.0	---	---	---	---
Shabliss-----	D	None	---	---	>6.0	---	---	---	---
252:									
Izar-----	D	None	---	---	>6.0	---	---	---	---
Hundraw-----	D	None	---	---	>6.0	---	---	---	---
Okan-----	B	Rare	---	---	>6.0	---	---	---	---
260:									
Dewar-----	D	None	---	---	>6.0	---	---	---	---
Chiara-----	D	None	---	---	>6.0	---	---	---	---
Hunnton-----	C	None	---	---	>6.0	---	---	---	---
270:									
Chiara-----	D	None	---	---	>6.0	---	---	---	---
Kelk-----	C	None	---	---	>6.0	---	---	---	---
Kelk-----	C	Rare	---	---	>6.0	---	---	---	---
273:									
Chiara-----	D	None	---	---	>6.0	---	---	---	---
Dewar-----	D	None	---	---	>6.0	---	---	---	---
Enko-----	C	None	---	---	>6.0	---	---	---	---
276:									
Chiara-----	D	None	---	---	>6.0	---	---	---	---
Peeko-----	D	None	---	---	>6.0	---	---	---	---
Urmafot-----	D	None	---	---	>6.0	---	---	---	---
279:									
Chiara-----	D	None	---	---	>6.0	---	---	---	---
Parisa-----	C	None	---	---	>6.0	---	---	---	---
Enko-----	C	None	---	---	>6.0	---	---	---	---
280:									
Cupico-----	C	None	---	---	>6.0	---	---	---	---
Enko-----	C	None	---	---	>6.0	---	---	---	---
282:									
Shabliss-----	D	None	---	---	>6.0	---	---	---	---
Pyrat-----	B	None	---	---	>6.0	---	---	---	---
Okan-----	B	Rare	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
310: Sonoma-----	C	Frequent	Long	Feb-Jun	1.5-3.0	Apparent	Feb-Jun	---	---
Devilsgait-----	D	Frequent	Long	Mar-Jun	0.0-1.5	Apparent	Feb-Jul	---	---
Sonoma-----	C	Occasional	Long	Mar-Jun	3.5-5.0	Apparent	Mar-Jun	---	---
311: Sonoma-----	B	None	---	---	>6.0	---	---	---	---
Kelk-----	C	Rare	---	---	>6.0	---	---	---	---
330: Kzin-----	D	None	---	---	>6.0	---	---	---	---
Holborn-----	C	None	---	---	>6.0	---	---	---	---
Kzin-----	D	None	---	---	>6.0	---	---	---	---
331: Kzin-----	D	None	---	---	>6.0	---	---	---	---
Cobre-----	C	None	---	---	>6.0	---	---	---	---
Jackpot-----	C	None	---	---	>6.0	---	---	---	---
333: Kzin-----	D	None	---	---	>6.0	---	---	---	---
Holborn-----	C	None	---	---	>6.0	---	---	---	---
Onkeyo-----	D	None	---	---	>6.0	---	---	---	---
340: Shuttle-----	B	None	---	---	>6.0	---	---	---	---
Hardhat-----	B	None	---	---	>6.0	---	---	---	---
Shuttle-----	B	None	---	---	>6.0	---	---	---	---
350: Jericho-----	D	None	---	---	>6.0	---	---	---	---
350 (con.): Jericho-----	D	None	---	---	>6.0	---	---	---	---
351: Shabliss-----	D	None	---	---	>6.0	---	---	---	---
Okan-----	B	Rare	---	---	>6.0	---	---	---	---
Eastwell-----	D	None	---	---	>6.0	---	---	---	---
355: Shabliss-----	D	None	---	---	>6.0	---	---	---	---
Okan-----	B	Rare	---	---	>6.0	---	---	---	---
Okan-----	B	Rare	---	---	>6.0	---	---	---	---
370: Toano-----	B	None	---	---	>6.0	---	---	---	---
Tulase-----	B	None	---	---	>6.0	---	---	---	---
371: Linoyer-----	B	None	---	---	>6.0	---	---	---	---
Okan-----	B	Rare	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
373:									
Timpie-----	B	None	---	---	>6.0	---	---	---	---
Piltown-----	B	None	---	---	>6.0	---	---	---	---
Linoyer-----	B	None	---	---	>6.0	---	---	---	---
374:									
Heist-----	B	None	---	---	>6.0	---	---	---	---
Okan-----	B	None	---	---	>6.0	---	---	---	---
Zerk-----	B	None	---	---	>6.0	---	---	---	---
375:									
Toano-----	B	None	---	---	>6.0	---	---	---	---
Heist-----	B	None	---	---	>6.0	---	---	---	---
380:									
Cobre-----	C	None	---	---	>6.0	---	---	---	---
Izar-----	D	None	---	---	>6.0	---	---	---	---
Jackpot-----	C	None	---	---	>6.0	---	---	---	---
381:									
Cobre-----	C	None	---	---	>6.0	---	---	---	---
Hundraw-----	D	None	---	---	>6.0	---	---	---	---
Jackpot-----	C	None	---	---	>6.0	---	---	---	---
382:									
Cobre-----	C	None	---	---	>6.0	---	---	---	---
Enko-----	C	None	---	---	>6.0	---	---	---	---
390:									
Hardol-----	B	None	---	---	>6.0	---	---	---	---
Muiral-----	C	None	---	---	>6.0	---	---	---	---
Rubble Land-----	A	None	---	---	>6.0	---	---	---	---
392:									
Hardol-----	B	None	---	---	>6.0	---	---	---	---
Muiral-----	C	None	---	---	>6.0	---	---	---	---
Onkeyo-----	D	None	---	---	>6.0	---	---	---	---
400:									
Cleavage-----	D	None	---	---	>6.0	---	---	---	---
Cleavage-----	D	None	---	---	>6.0	---	---	---	---
Sumine-----	C	None	---	---	>6.0	---	---	---	---
410:									
Jericho-----	D	None	---	---	>5.0	---	---	---	---
411:									
Jericho-----	D	None	---	---	>5.0	---	---	---	---
Armespan-----	B	None	---	---	>6.0	---	---	---	---
420:									
Palinor-----	D	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

[illegible]

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
471: Cucamungo-----	D	None	---	---	>6.0	---	---	---	---
Hendap-----	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop.									
480: Shabliss-----	D	None	---	---	>6.0	---	---	---	---
Palinor-----	D	None	---	---	>6.0	---	---	---	---
485: Shabliss-----	D	None	---	---	>6.0	---	---	---	---
Parisa-----	C	None	---	---	>6.0	---	---	---	---
Hunnton-----	C	None	---	---	>6.0	---	---	---	---
490: Wintermute-----	C	None	---	---	>6.0	---	---	---	---
Automal-----	C	None	---	---	>6.0	---	---	---	---
492: Wintermute-----	C	None	---	---	>6.0	---	---	---	---
Peeko-----	D	None	---	---	>6.0	---	---	---	---
Hundraw-----	D	None	---	---	>6.0	---	---	---	---
494: Wintermute-----	C	None	---	---	>6.0	---	---	---	---
Pyrat-----	B	None	---	---	>6.0	---	---	---	---
Automal-----	C	None	---	---	>6.0	---	---	---	---
496: Sodhouse-----	D	None	---	---	>6.0	---	---	---	---
Sodhouse-----	D	None	---	---	>6.0	---	---	---	---
Linoyer-----	B	None	---	---	>6.0	---	---	---	---
497: Sodhouse-----	D	None	---	---	>6.0	---	---	---	---
Sodhouse-----	D	None	---	---	>6.0	---	---	---	---
Palinor-----	D	None	---	---	>6.0	---	---	---	---
501: Pharo-----	B	None	---	---	>6.0	---	---	---	---
Izar-----	D	None	---	---	>6.0	---	---	---	---
Okan-----	B	Rare	---	---	>6.0	---	---	---	---
503: Automal-----	C	None	---	---	>6.0	---	---	---	---
Okan-----	B	Rare	---	---	>6.0	---	---	---	---
Wintermute-----	C	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
504:									
Automal-----	C	None	---	---	>6.0	---	---	---	---
Wintermute-----	C	None	---	---	>6.0	---	---	---	---
510:									
Adobe-----	D	None	---	---	>6.0	---	---	---	---
Hardzem-----	C	None	---	---	>6.0	---	---	---	---
Haunchee-----	D	None	---	---	>6.0	---	---	---	---
511:									
Adobe-----	D	None	---	---	>6.0	---	---	---	---
Wardbay-----	B	None	---	---	>6.0	---	---	---	---
Hardol-----	B	None	---	---	>6.0	---	---	---	---
512:									
Adobe-----	D	None	---	---	>6.0	---	---	---	---
Cavehill-----	C	None	---	---	>6.0	---	---	---	---
Wardbay-----	B	None	---	---	>6.0	---	---	---	---
520:									
Haunchee-----	D	None	---	---	>6.0	---	---	---	---
Muiral-----	C	None	---	---	>6.0	---	---	---	---
Wardbay-----	B	None	---	---	>6.0	---	---	---	---
530:									
Wardbay-----	B	None	---	---	>6.0	---	---	---	---
Adobe-----	D	None	---	---	>6.0	---	---	---	---
Haunchee-----	D	None	---	---	>6.0	---	---	---	---
532:									
Onkeyo-----	D	None	---	---	>6.0	---	---	---	---
Pookaloo-----	D	None	---	---	>6.0	---	---	---	---
Tecomar-----	D	None	---	---	>6.0	---	---	---	---
540:									
Kunzler-----	B	None	---	---	>6.0	---	---	---	---
Sycomat-----	B	None	---	---	>6.0	---	---	---	---
541:									
Kunzler-----	B	None	---	---	>6.0	---	---	---	---
Sheffit-----	D	None	---	---	5.0-6.0	Apparent	Jan-May	---	---
550:									
Urmafot-----	D	None	---	---	>6.0	---	---	---	---
Bobs-----	D	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
550 (con.): Urmafot-----	D	None	---	---	>6.0	---	---	---	---
551: Urmafot-----	D	None	---	---	>6.0	---	---	---	---
Bobs-----	D	None	---	---	>6.0	---	---	---	---
552: Urmafot-----	D	None	---	---	>6.0	---	---	---	---
Pharo-----	B	None	---	---	>6.0	---	---	---	---
554: Urmafot-----	D	None	---	---	>6.0	---	---	---	---
Tecomar-----	D	None	---	---	>6.0	---	---	---	---
Urmafot-----	D	None	---	---	>6.0	---	---	---	---
561: Palinor-----	D	None	---	---	>6.0	---	---	---	---
Urmafot-----	D	None	---	---	>6.0	---	---	---	---
Palinor-----	D	None	---	---	>6.0	---	---	---	---
562: Bobs-----	D	None	---	---	>6.0	---	---	---	---
563: Bobs-----	D	None	---	---	>6.0	---	---	---	---
Pyrat-----	B	None	---	---	>6.0	---	---	---	---
Bobs-----	D	None	---	---	>6.0	---	---	---	---
575: Pookaloo-----	D	None	---	---	>6.0	---	---	---	---
Cavehill-----	C	None	---	---	>6.0	---	---	---	---
Rock Outcrop.									
576: Pookaloo-----	D	None	---	---	>6.0	---	---	---	---
Tecomar-----	D	None	---	---	>6.0	---	---	---	---
Onkeyo-----	D	None	---	---	>6.0	---	---	---	---
582: Sheffit-----	D	None	---	---	5.0-6.0	Apparent	Jan-May	---	---
Sheffit-----	D	None	---	---	5.0-6.0	Apparent	Jan-May	---	---
Katelana-----	B	None	---	---	>6.0	---	---	---	---
590: Upatad-----	D	None	---	---	>6.0	---	---	---	---
Segura-----	D	None	---	---	>6.0	---	---	---	---
600: Onkeyo-----	D	None	---	---	>6.0	---	---	---	---
Amene-----	D	None	---	---	>6.0	---	---	---	---
Pookaloo-----	D	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
610: Wintermute-----	C	None	---	---	>6.0	---	---	---	---
Eastwell-----	D	None	---	---	>6.0	---	---	---	---
614: Wintermute-----	C	None	---	---	>6.0	---	---	---	---
Eastwell-----	D	None	---	---	>6.0	---	---	---	---
Zerk-----	B	None	---	---	>6.0	---	---	---	---
617: Wintermute-----	C	None	---	---	>6.0	---	---	---	---
Zerk-----	B	None	---	---	>6.0	---	---	---	---
Loray-----	A	None	---	---	>6.0	---	---	---	---
620: Atlow-----	D	None	---	---	>6.0	---	---	---	---
Atlow-----	D	None	---	---	>6.0	---	---	---	---
631: Eastwell-----	D	None	---	---	>6.0	---	---	---	---
Wintermute-----	C	None	---	---	>6.0	---	---	---	---
Okan-----	B	Rare	---	---	>6.0	---	---	---	---
632: Eastwell-----	D	None	---	---	>6.0	---	---	---	---
Zafod-----	C	None	---	---	>6.0	---	---	---	---
634: Eastwell-----	D	None	---	---	>6.0	---	---	---	---
Shabliss-----	D	None	---	---	>6.0	---	---	---	---
Izar-----	D	None	---	---	>6.0	---	---	---	---
636: Eastwell-----	D	None	---	---	>6.0	---	---	---	---
Hundraw-----	D	None	---	---	>6.0	---	---	---	---
Okan-----	B	Rare	---	---	>6.0	---	---	---	---
650: Mizpah-----	D	None	---	---	>6.0	---	---	---	---
Zerk-----	B	None	---	---	>6.0	---	---	---	---
Wintermute-----	C	None	---	---	>6.0	---	---	---	---
671: Idway-----	B	None	---	---	>6.0	---	---	---	---
Mysol-----	C	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
672: Idway-----	B	None	---	---	>6.0	---	---	---	---
James Canyon----	B	Rare	---	---	4.0-6.0	Apparent	Dec-May	---	---
680: Simon-----	B	None	---	---	>6.0	---	---	---	---
Graley-----	D	None	---	---	>6.0	---	---	---	---
Chen-----	D	None	---	---	>6.0	---	---	---	---
691: Tarnach-----	D	None	---	---	>6.0	---	---	---	---
Tarnach-----	D	None	---	---	>6.0	---	---	---	---
Wesfil-----	D	None	---	---	>6.0	---	---	---	---
692: Tarnach-----	D	None	---	---	>6.0	---	---	---	---
Upatad-----	D	None	---	---	>6.0	---	---	---	---
Wesfil-----	D	None	---	---	>6.0	---	---	---	---
700: Shabliss-----	D	None	---	---	>6.0	---	---	---	---
Tulase-----	B	None	---	---	>6.0	---	---	---	---
Linoyer-----	B	None	---	---	>6.0	---	---	---	---
720: Mysol-----	C	None	---	---	>6.0	---	---	---	---
Mysol-----	C	None	---	---	>6.0	---	---	---	---
730: Idway-----	B	None	---	---	>6.0	---	---	---	---
Kawich-----	A	None	---	---	>6.0	---	---	---	---
Mysol-----	C	None	---	---	>6.0	---	---	---	---
733: Idway-----	B	None	---	---	>6.0	---	---	---	---
Idway-----	B	None	---	---	>6.0	---	---	---	---
Mysol-----	C	None	---	---	>6.0	---	---	---	---
740: Upatad-----	D	None	---	---	>6.0	---	---	---	---
Ploche-----	D	None	---	---	>6.0	---	---	---	---
Tarnach-----	D	None	---	---	>6.0	---	---	---	---
760: Playas-----	D	Rare	---	---	-1.0-1.0	Apparent	Feb-Sep	Long	1.0
761: Umberland-----	D	None	---	---	-1.0-2.5	Apparent	Jan-Dec	Long	1.0
Umberland-----	D	None	---	---	2.5-5.0	Apparent	Dec-Jun	---	---
Playas-----	D	None	---	---	-1.0-1.0	Apparent	Feb-Sep	Long	1.0

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
762: Umberland-----	D	None	---	---	-1.0-2.5	Apparent	Jan-Dec	Long	1.0
763: Equis-----	D	Rare	---	---	3.0-5.0	Apparent	Feb-Apr	---	---
Umberland-----	D	None	---	---	2.5-5.0	Apparent	Dec-Jun	---	---
Duffer-----	C	Occasional	Very brief	Jan-Jun	1.5-3.0	Apparent	Jan-Jun	---	---
764: Umberland-----	D	None	---	---	2.5-5.0	Apparent	Dec-Jun	---	---
Rubylake-----	D	Rare	---	---	1.0-2.0	Apparent	Mar-Jun	---	---
Orupa-----	B	None	---	---	>6.0	---	---	---	---
765: Umberland-----	D	None	---	---	-1.0-2.5	Apparent	Jan-Dec	Long	1.0
Umberland-----	D	None	---	---	2.5-5.0	Apparent	Dec-Jun	---	---
Wendane-----	C	Rare	---	---	2.5-4.0	Apparent	Feb-Jul	---	---
767: Umberland-----	D	None	---	---	2.5-5.0	Apparent	Dec-Jun	---	---
Umberland-----	D	None	---	---	-1.0-2.5	Apparent	Jan-Dec	Long	1.0
Orupa-----	B	None	---	---	>6.0	---	---	---	---
781: Mysol-----	C	None	---	---	>6.0	---	---	---	---
Benin-----	D	None	---	---	>6.0	---	---	---	---
Wendane-----	C	Rare	---	---	2.5-4.0	Apparent	Feb-Jul	---	---
800: Mazuma-----	B	None	---	---	>6.0	---	---	---	---
Tcano-----	B	None	---	---	>6.0	---	---	---	---
801: Mazuma-----	B	None	---	---	>6.0	---	---	---	---
Zerk-----	B	None	---	---	>6.0	---	---	---	---
Okan-----	B	None	---	---	>6.0	---	---	---	---
804: Mazuma-----	B	None	---	---	>6.0	---	---	---	---
Kawich-----	A	None	---	---	>6.0	---	---	---	---
Playas-----	D	Rare	---	---	-1.0-1.0	Apparent	Feb-Sep	Long	1.0
807: Mazuma-----	B	None	---	---	>6.0	---	---	---	---
Kunzler-----	B	None	---	---	>6.0	---	---	---	---
Zerk-----	B	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
823: Kunzler-----	B	None	---	---	>6.0	---	---	---	---
Pyrat-----	B	None	---	---	>6.0	---	---	---	---
Blimo-----	C	None	---	---	>6.0	---	---	---	---
824: Kunzler-----	B	None	---	---	>6.0	---	---	---	---
Katelana-----	B	None	---	---	>6.0	---	---	---	---
827: Kunzler-----	B	None	---	---	>6.0	---	---	---	---
James Canyon----	D	Occasional	Brief	Mar-May	1.5-2.0	Apparent	Mar-Jun	---	---
James Canyon----	B	None	---	---	4.0-6.0	Apparent	Dec-May	---	---
828: Kunzler-----	B	None	---	---	>6.0	---	---	---	---
Pyrat-----	B	None	---	---	>6.0	---	---	---	---
Wendane-----	C	Rare	---	---	2.5-4.0	Apparent	Feb-Jul	---	---
830: Pharo-----	B	None	---	---	>6.0	---	---	---	---
Kzin-----	D	None	---	---	>6.0	---	---	---	---
Pharo-----	B	None	---	---	>6.0	---	---	---	---
842: Katelana-----	B	None	---	---	>6.0	---	---	---	---
Timpie-----	B	None	---	---	>6.0	---	---	---	---
843: Katelana-----	B	None	---	---	>6.0	---	---	---	---
Kawich-----	A	None	---	---	>6.0	---	---	---	---
845: Katelana-----	B	None	---	---	>6.0	---	---	---	---
Ragtown-----	C	None	---	---	>6.0	---	---	---	---
Timpie-----	B	None	---	---	>6.0	---	---	---	---
847: Mazuma-----	B	None	---	---	>6.0	---	---	---	---
Blimo-----	C	None	---	---	>6.0	---	---	---	---
Wintermute-----	C	None	---	---	>6.0	---	---	---	---
850: Palinor-----	D	None	---	---	>6.0	---	---	---	---
Wintermute-----	C	None	---	---	>6.0	---	---	---	---
Okan-----	B	Rare	---	---	>6.0	---	---	---	---
851: Palinor-----	D	None	---	---	>6.0	---	---	---	---
Zimbob-----	D	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
851 (con.): Tecomar-----	D	None	---	---	>6.0	---	---	---	---
852: Palinor-----	D	None	---	---	>6.0	---	---	---	---
Pyrat-----	B	None	---	---	>6.0	---	---	---	---
Shabliss-----	D	None	---	---	>6.0	---	---	---	---
854: Palinor-----	D	None	---	---	>6.0	---	---	---	---
Automal-----	C	None	---	---	>6.0	---	---	---	---
Shabliss-----	D	None	---	---	>6.0	---	---	---	---
856: Palinor-----	D	None	---	---	>6.0	---	---	---	---
Parisa-----	C	None	---	---	>6.0	---	---	---	---
857: Palinor-----	D	None	---	---	>6.0	---	---	---	---
Shabliss-----	D	None	---	---	>6.0	---	---	---	---
Linoyer-----	B	None	---	---	>6.0	---	---	---	---
858: Palinor-----	D	None	---	---	>6.0	---	---	---	---
Automal-----	C	None	---	---	>6.0	---	---	---	---
Linoyer-----	B	None	---	---	>6.0	---	---	---	---
870: Theriot-----	D	None	---	---	>6.0	---	---	---	---
Zimbob-----	D	None	---	---	>6.0	---	---	---	---
880: Duffer-----	C	Rare	---	---	3.0-5.0	Apparent	Feb-Jun	---	---
Duffer-----	C	Occasional	Very brief	Jan-Jun	1.5-3.0	Apparent	Jan-Jun	---	---
Kolda-----	D	None	---	---	0.0-1.5	Apparent	Oct-Jun	---	---
881: Duffer-----	C	Rare	---	---	3.0-5.0	Apparent	Feb-Jun	---	---
Kunzler-----	B	None	---	---	>6.0	---	---	---	---
882: Duffer-----	C	Occasional	Very brief	Jan-Jun	1.5-3.0	Apparent	Jan-Jun	---	---
Kolda-----	D	None	---	---	0.0-1.5	Apparent	Oct-Jun	---	---
894: Zerk-----	B	None	---	---	>6.0	---	---	---	---
Threese-----	B	None	---	---	>6.0	---	---	---	---
Mazuma-----	B	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
900: Zerk-----	B	None	---	---	>6.0	---	---	---	---
Automal-----	C	None	---	---	>6.0	---	---	---	---
Linoyer-----	B	None	---	---	>6.0	---	---	---	---
910: Ragtown-----	C	None	---	---	>6.0	---	---	---	---
Ragtown-----	C	None	---	---	>6.0	---	---	---	---
912: Katelana-----	B	None	---	---	>6.0	---	---	---	---
Katelana-----	B	None	---	---	>6.0	---	---	---	---
914: Katelana-----	B	None	---	---	>6.0	---	---	---	---
Benin-----	D	None	---	---	>6.0	---	---	---	---
Sheffit-----	D	None	---	---	5.0-6.0	Apparent	Jan-May	---	---
917: Katelana-----	B	None	---	---	>6.0	---	---	---	---
Sheffit-----	D	None	---	---	5.0-6.0	Apparent	Jan-May	---	---
Ragtown-----	C	None	---	---	>6.0	---	---	---	---
918: Katelana-----	B	None	---	---	>6.0	---	---	---	---
Zoravista-----	A	None	---	---	>6.0	---	---	---	---
Playas-----	D	None	---	---	-1.0-1.0	Apparent	Feb-Sep	Long	1.0
930: Okan-----	B	None	---	---	>6.0	---	---	---	---
Toano-----	B	None	---	---	>6.0	---	---	---	---
Loray-----	A	None	---	---	>6.0	---	---	---	---
932: Okan-----	B	None	---	---	>6.0	---	---	---	---
Pyrat-----	B	None	---	---	>6.0	---	---	---	---
941: Sheffit-----	D	None	---	---	5.0-6.0	Apparent	Jan-May	---	---
Sheffit-----	D	None	---	---	5.0-6.0	Apparent	Jan-May	---	---
Zoravista-----	A	None	---	---	>6.0	---	---	---	---
943: Sheffit-----	D	None	---	---	5.0-6.0	Apparent	Jan-May	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
943 (con.): Umberland-----	D	None	---	---	2.5-5.0	Apparent	Dec-Jun	---	---
960: Graviser-----	B	None	---	---	>6.0	---	---	---	---
Zerk-----	B	None	---	---	>6.0	---	---	---	---
961: Graviser-----	B	None	---	---	>6.0	---	---	---	---
Piltown-----	B	None	---	---	>6.0	---	---	---	---
Zerk-----	B	None	---	---	>6.0	---	---	---	---
972: Zimbob-----	D	None	---	---	>6.0	---	---	---	---
Zimbob-----	D	None	---	---	>6.0	---	---	---	---
Pookaloo-----	D	None	---	---	>6.0	---	---	---	---
974: Zimbob-----	D	None	---	---	>6.0	---	---	---	---
Tecomar-----	D	None	---	---	>6.0	---	---	---	---
Pookaloo-----	D	None	---	---	>6.0	---	---	---	---
975: Zimbob-----	D	None	---	---	>6.0	---	---	---	---
Tecomar-----	D	None	---	---	>6.0	---	---	---	---
Tecomar-----	D	None	---	---	>6.0	---	---	---	---
980: Onkeyo-----	D	None	---	---	>6.0	---	---	---	---
Pookaloo-----	D	None	---	---	>6.0	---	---	---	---
Zimbob-----	D	None	---	---	>6.0	---	---	---	---
990: Hyzen-----	D	None	---	---	>6.0	---	---	---	---
Zimbob-----	D	None	---	---	>6.0	---	---	---	---
991: Hyzen-----	D	None	---	---	>6.0	---	---	---	---
Cavehill-----	C	None	---	---	>6.0	---	---	---	---
Tecomar-----	D	None	---	---	>6.0	---	---	---	---
1000: Pyrat-----	B	None	---	---	>6.0	---	---	---	---
Zerk-----	B	None	---	---	>6.0	---	---	---	---
1001: Pyrat-----	B	None	---	---	>6.0	---	---	---	---
Okan-----	B	Rare	---	---	>6.0	---	---	---	---
Eastwell-----	D	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
1002:									
Threesee-----	B	None	---	---	>6.0	---	---	---	---
Kunzler-----	B	None	---	---	>6.0	---	---	---	---
Threesee-----	B	None	---	---	>6.0	---	---	---	---
1003:									
Pyrat-----	B	None	---	---	>6.0	---	---	---	---
Hundraw-----	D	None	---	---	>6.0	---	---	---	---
Tulase-----	B	None	---	---	>6.0	---	---	---	---
1004:									
Pyrat-----	B	None	---	---	>6.0	---	---	---	---
Parisa-----	C	None	---	---	>6.0	---	---	---	---
Tulase-----	B	None	---	---	>6.0	---	---	---	---
1005:									
Pyrat-----	B	None	---	---	>6.0	---	---	---	---
Zerk-----	B	None	---	---	>6.0	---	---	---	---
Parisa-----	C	None	---	---	>6.0	---	---	---	---
1006:									
Pyrat-----	B	None	---	---	>6.0	---	---	---	---
Blimo-----	C	None	---	---	>6.0	---	---	---	---
1007:									
Pyrat-----	B	None	---	---	>6.0	---	---	---	---
Parisa-----	C	None	---	---	>6.0	---	---	---	---
Automal-----	C	None	---	---	>6.0	---	---	---	---
1009:									
Pyrat-----	B	None	---	---	>6.0	---	---	---	---
Tulase-----	B	None	---	---	>6.0	---	---	---	---
Wintermute-----	C	None	---	---	>6.0	---	---	---	---
1020:									
Okan-----	B	Rare	---	---	>6.0	---	---	---	---
Eastwell-----	D	None	---	---	>6.0	---	---	---	---
Blimo-----	C	None	---	---	>6.0	---	---	---	---
1023:									
Okan-----	B	Rare	---	---	>6.0	---	---	---	---
Okan-----	B	Rare	---	---	>6.0	---	---	---	---
Katelana-----	B	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
1030:									
Segura-----	D	None	---	---	>6.0	---	---	---	---
Bullump-----	B	None	---	---	>6.0	---	---	---	---
Hutchley-----	D	None	---	---	>6.0	---	---	---	---
1040:									
Segura-----	D	None	---	---	>6.0	---	---	---	---
Pioche-----	D	None	---	---	>6.0	---	---	---	---
Chen-----	D	None	---	---	>6.0	---	---	---	---
1061:									
Pioche-----	D	None	---	---	>6.0	---	---	---	---
Cucamongo-----	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop.									
1070:									
Zafod-----	C	None	---	---	>6.0	---	---	---	---
Automal-----	C	None	---	---	>6.0	---	---	---	---
Okan-----	B	Rare	---	---	>6.0	---	---	---	---
1080:									
Cotant-----	D	None	---	---	>6.0	---	---	---	---
Segura-----	D	None	---	---	>6.0	---	---	---	---
1111:									
Parisa-----	C	None	---	---	>6.0	---	---	---	---
1120:									
Okan-----	B	None	---	---	>6.0	---	---	---	---
Automal-----	C	None	---	---	>6.0	---	---	---	---
1150:									
Adobe-----	D	None	---	---	>6.0	---	---	---	---
Wardbay-----	B	None	---	---	>6.0	---	---	---	---
Haunchee-----	D	None	---	---	>6.0	---	---	---	---
1161:									
Pharo-----	B	None	---	---	>6.0	---	---	---	---
Bobs-----	D	None	---	---	>6.0	---	---	---	---
Pookaloo-----	D	None	---	---	>6.0	---	---	---	---
1171:									
Pyrat-----	B	None	---	---	>6.0	---	---	---	---
Automal-----	C	None	---	---	>6.0	---	---	---	---
Gravier-----	B	None	---	---	>6.0	---	---	---	---
1172:									
Pyrat-----	B	None	---	---	>6.0	---	---	---	---
Automal-----	C	None	---	---	>6.0	---	---	---	---
Automal-----	C	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
1173:									
Pyrat-----	B	None	---	---	>6.0	---	---	---	---
Automal-----	C	None	---	---	>6.0	---	---	---	---
1174:									
Pyrat-----	B	None	---	---	>6.0	---	---	---	---
Tosser-----	B	None	---	---	>6.0	---	---	---	---
1180:									
Haunchee-----	D	None	---	---	>6.0	---	---	---	---
Cavehill-----	C	None	---	---	>6.0	---	---	---	---
1181:									
Haunchee-----	D	None	---	---	>6.0	---	---	---	---
Halacan-----	D	None	---	---	>6.0	---	---	---	---
Wardbay-----	B	None	---	---	>6.0	---	---	---	---
1190:									
Upatad-----	D	None	---	---	>6.0	---	---	---	---
Atlow-----	D	None	---	---	>6.0	---	---	---	---
Upatad-----	D	None	---	---	>6.0	---	---	---	---
1191:									
Upatad-----	D	None	---	---	>6.0	---	---	---	---
Pioche-----	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop.									
1200:									
Hardol-----	B	None	---	---	>6.0	---	---	---	---
Hardzem-----	C	None	---	---	>6.0	---	---	---	---
Rock Outcrop.									
1201:									
Hardol-----	B	None	---	---	>6.0	---	---	---	---
Rock Outcrop.									
Wardbay-----	B	None	---	---	>6.0	---	---	---	---
1210:									
Blimo-----	C	None	---	---	>6.0	---	---	---	---
Kunzler-----	B	None	---	---	>6.0	---	---	---	---
Linoyer-----	B	None	---	---	>6.0	---	---	---	---
1213:									
Blimo-----	C	None	---	---	>6.0	---	---	---	---
Threesee-----	B	None	---	---	>6.0	---	---	---	---
1215:									
Blimo-----	C	None	---	---	>6.0	---	---	---	---
Zorravista-----	A	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
1216:									
Blimo-----	C	None	---	---	>6.0	---	---	---	---
Idway-----	B	None	---	---	>6.0	---	---	---	---
Mazuma-----	B	None	---	---	>6.0	---	---	---	---
1220:									
Onkeyo-----	D	None	---	---	>6.0	---	---	---	---
Adobe-----	D	None	---	---	>6.0	---	---	---	---
Pookaloo-----	D	None	---	---	>6.0	---	---	---	---
1230:									
Hardzem-----	C	None	---	---	>6.0	---	---	---	---
Haunchee-----	D	None	---	---	>6.0	---	---	---	---
Wardbay-----	B	None	---	---	>6.0	---	---	---	---
1240:									
Benin-----	D	None	---	---	>6.0	---	---	---	---
Benin-----	D	None	---	---	>6.0	---	---	---	---
1241:									
Benin-----	D	None	---	---	>6.0	---	---	---	---
Playas-----	D	None	---	---	-1.0-1.0	Apparent	Feb-Sep	Long	1.0
Benin-----	D	None	---	---	>6.0	---	---	---	---
1250:									
Tecomar-----	D	None	---	---	>6.0	---	---	---	---
Pookaloo-----	D	None	---	---	>6.0	---	---	---	---
1270:									
Katelana-----	B	None	---	---	>6.0	---	---	---	---
Sheffit-----	D	None	---	---	5.0-6.0	Apparent	Jan-May	---	---
1271:									
Uvada-----	D	None	---	---	>6.0	---	---	---	---
Ragtown-----	C	None	---	---	>6.0	---	---	---	---
1272:									
Katelana-----	B	None	---	---	>6.0	---	---	---	---
Kawich-----	A	None	---	---	>6.0	---	---	---	---
1280:									
Sycomat-----	B	None	---	---	>6.0	---	---	---	---
Kunzler-----	B	None	---	---	>6.0	---	---	---	---
1281:									
Sycomat-----	B	None	---	---	>6.0	---	---	---	---
Mazuma-----	B	None	---	---	>6.0	---	---	---	---
1290:									
Heist-----	B	None	---	---	>6.0	---	---	---	---
Blimo-----	C	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

[illegible]

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
1440:									
Boofuss-----	D	Rare	---	---	-0.5-2.5	Apparent	Jan-Jul	Long	0.5
Boofuss-----	D	Rare	---	---	-0.5-2.5	Apparent	Jan-Jul	Long	0.5
Equis-----	D	Rare	---	---	1.0-3.0	Apparent	Feb-Apr	---	---
1441:									
Boofuss-----	D	Rare	---	---	-0.5-2.5	Apparent	Jan-Jul	Long	0.5
Wendane-----	C	Rare	---	---	2.5-4.0	Apparent	Feb-Jul	---	---
Umberland-----	D	None	---	---	2.5-5.0	Apparent	Dec-Jun	---	---
1450:									
Piltown-----	B	None	---	---	>6.0	---	---	---	---
Kawich-----	A	None	---	---	>6.0	---	---	---	---
1460:									
Tosser-----	B	None	---	---	>6.0	---	---	---	---
Threesee-----	B	None	---	---	>6.0	---	---	---	---
1471:									
Timpie-----	B	None	---	---	>6.0	---	---	---	---
Kunzler-----	B	None	---	---	>6.0	---	---	---	---
Threesee-----	B	None	---	---	>6.0	---	---	---	---
1480:									
Tulase-----	B	None	---	---	>6.0	---	---	---	---
Linoyer-----	B	None	---	---	>6.0	---	---	---	---
1500:									
Tooele-----	B	None	---	---	>6.0	---	---	---	---
Loray-----	A	None	---	---	>6.0	---	---	---	---
1510:									
Izamatch-----	A	None	---	---	>6.0	---	---	---	---
Cliffdown-----	B	None	---	---	>6.0	---	---	---	---
1520:									
Izamatch-----	A	None	---	---	>6.0	---	---	---	---
Izamatch-----	A	None	---	---	>6.0	---	---	---	---
Luning-----	A	None	---	---	>6.0	---	---	---	---
1521:									
Izamatch-----	A	None	---	---	>6.0	---	---	---	---
Izamatch-----	A	None	---	---	>6.0	---	---	---	---
Theriot-----	D	None	---	---	>6.0	---	---	---	---
1522:									
Izamatch-----	A	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
1522 (con.): Smaug-----	B	None	---	---	>6.0	---	---	---	---
Badland-----	D	None	---	---	>6.0	---	---	---	---
1530: Theriot-----	D	None	---	---	>6.0	---	---	---	---
Theriot-----	D	None	---	---	>6.0	---	---	---	---
Izamatch-----	A	None	---	---	>6.0	---	---	---	---
1531: Theriot-----	D	None	---	---	>6.0	---	---	---	---
Izamatch-----	A	None	---	---	>6.0	---	---	---	---
Rock Outcrop.									
1532: Theriot-----	D	None	---	---	>6.0	---	---	---	---
Theriot-----	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop.									
1540: Kyler-----	D	None	---	---	>6.0	---	---	---	---
Amtoft-----	D	None	---	---	>6.0	---	---	---	---
Amtoft-----	D	None	---	---	>6.0	---	---	---	---
1541: Kyler-----	D	None	---	---	>6.0	---	---	---	---
Kyler-----	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop.									
1542: Kyler-----	D	None	---	---	>6.0	---	---	---	---
1542 (con.): Amtoft-----	D	None	---	---	>6.0	---	---	---	---
Jericho-----	D	None	---	---	>5.0	---	---	---	---
1550: Jericho-----	D	None	---	---	>5.0	---	---	---	---
Jericho-----	D	None	---	---	>5.0	---	---	---	---
1560: Toano-----	B	None	---	---	>6.0	---	---	---	---
Timpie-----	B	None	---	---	>6.0	---	---	---	---
1570: Jericho-----	D	None	---	---	>5.0	---	---	---	---
Xeric Torriorthents--	A	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Pending duration	Maximum ponding depth
					Ft				Ft
1580: Armespan-----	B	None	---	---	>6.0	---	---	---	---
Jericho-----	D	None	---	---	>5.0	---	---	---	---
1581: Armespan-----	B	None	---	---	>6.0	---	---	---	---
Kyler-----	D	None	---	---	>6.0	---	---	---	---
Heist-----	B	None	---	---	>6.0	---	---	---	---
1582: Armespan-----	B	None	---	---	>6.0	---	---	---	---
Xeric Torriorthents--	A	None	---	---	>6.0	---	---	---	---
1590: Luning-----	A	None	---	---	>6.0	---	---	---	---
Luning-----	A	None	---	---	>6.0	---	---	---	---
Loray-----	A	None	---	---	>6.0	---	---	---	---
1591: Luning-----	A	None	---	---	>6.0	---	---	---	---
Izamatch-----	A	None	---	---	>6.0	---	---	---	---
Badland-----	D	None	---	---	>6.0	---	---	---	---
1600: Eaglepass-----	D	None	---	---	>6.0	---	---	---	---
Antoft-----	D	None	---	---	>6.0	---	---	---	---
1610: Xeric Torriorthents--	A	None	---	---	>6.0	---	---	---	---
Armespan-----	B	None	---	---	>6.0	---	---	---	---
Badland-----	D	None	---	---	>6.0	---	---	---	---
1620: Kolda-----	D	None	---	---	-3.0-0.0	Apparent	Jan-Dec	Very long	3.0
Duffer-----	C	Occasional	Very brief	Jan-Jun	1.5-3.0	Apparent	Jan-Jun	---	---
Sonoma-----	C	Frequent	Long	Feb-Jun	1.5-3.0	Apparent	Feb-Jun	---	---
1621: Kolda-----	D	None	---	---	-1.0-2.0	Apparent	Apr-Jun	Long	1.0
Rubylake-----	C	Rare	---	---	1.5-3.0	Apparent	Mar-Jun	---	---
Kolda-----	D	None	---	---	-3.0-0.0	Apparent	Jan-Dec	Very long	3.0
1622: Kolda-----	D	None	---	---	-3.0-0.0	Apparent	Jan-Dec	Very long	3.0

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
1623: Kolda----- Water.	D	None	---	---	-3.0-0.0	Apparent	Jan-Dec	Very long	3.0
1630: Pookaloo----- Cavehill----- Rock Outcrop.	D	None	---	---	>6.0	---	---	---	---
	C	None	---	---	>6.0	---	---	---	---
1631: Pookaloo----- Tecomar----- Wardbay-----	D	None	---	---	>6.0	---	---	---	---
	D	None	---	---	>6.0	---	---	---	---
	B	None	---	---	>6.0	---	---	---	---
1640: Jungo----- Jungo-----	B	None	---	---	>6.0	---	---	---	---
	B	None	---	---	>6.0	---	---	---	---
1650: Shantown----- Zorravista-----	A	None	---	---	>6.0	---	---	---	---
	A	None	---	---	>6.0	---	---	---	---
1651: Shantown----- Shantown-----	A	None	---	---	>6.0	---	---	---	---
	A	None	---	---	>6.0	---	---	---	---
1660: Wendane----- Logan-----	C	Occasional	Long	Dec-Jun	2.5-4.0	Apparent	Feb-Jul	---	---
	D	Occasional	Brief	Mar-May	1.0-1.5	Apparent	Apr-Jun	---	---
1670: Wendane----- Logan----- Wendane-----	C	Rare	---	---	2.5-4.0	Apparent	Feb-Jul	---	---
	D	Occasional	Brief	Mar-May	1.0-1.5	Apparent	Apr-Jun	---	---
	C	Occasional	Long	Dec-Jun	2.5-4.0	Apparent	Feb-Jul	---	---
1680: Rubylake----- Kolda----- Wendane-----	C	Rare	---	---	1.5-3.0	Apparent	Mar-Jun	---	---
	D	None	---	---	-1.0-2.0	Apparent	Apr-Jun	Long	1.0
	C	Rare	---	---	2.5-4.0	Apparent	Feb-Jul	---	---
1681: Wendane----- Logan----- Umberland-----	C	Rare	---	---	2.5-4.0	Apparent	Feb-Jul	---	---
	D	Occasional	Brief	Mar-May	1.0-1.5	Apparent	Apr-Jun	---	---
	D	None	---	---	2.5-5.0	Apparent	Dec-Jun	---	---
1690: Krenka----- Secrepass-----	B	None	---	---	>6.0	---	---	---	---
	D	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
1700: Heechee-----	B	None	---	---	>6.0	---	---	---	---
Rubicity-----	B	None	---	---	>6.0	---	---	---	---
Heechee-----	B	None	---	---	>6.0	---	---	---	---
1702: Heechee-----	B	None	---	---	>6.0	---	---	---	---
McIvey-----	C	None	---	---	>6.0	---	---	---	---
Rubicity-----	B	None	---	---	>6.0	---	---	---	---
1710: James Canyon----	D	Occasional	Brief	Mar-May	1.5-2.0	Apparent	Mar-Jun	---	---
Wendane-----	C	Rare	---	---	2.5-4.0	Apparent	Feb-Jul	---	---
1711: James Canyon----	D	Occasional	Brief	Mar-May	1.5-2.0	Apparent	Mar-Jun	---	---
Wendane-----	C	Rare	---	---	2.5-4.0	Apparent	Feb-Jul	---	---
Wendane-----	C	Occasional	Long	Dec-Jun	2.5-4.0	Apparent	Feb-Jul	---	---
1720: Welch-----	D	Occasional	Brief	Mar-Jun	0.0-1.5	Apparent	Nov-Jun	---	---
1721: Welch-----	D	Occasional	Brief	Mar-Jun	0.0-1.5	Apparent	Nov-Jun	---	---
Welsum-----	D	Frequent	Brief	Mar-May	0.0-1.5	Apparent	Feb-Jun	---	---
1722: Welch-----	C	Rare	---	---	4.0-6.0	Apparent	Nov-Jun	---	---
Slipback-----	B	None	---	---	>6.0	---	---	---	---
Welch-----	D	Occasional	Brief	Mar-Jun	1.0-1.5	Apparent	Nov-Jun	---	---
1723: Welch-----	D	Occasional	Brief	Mar-Jun	0.0-1.5	Apparent	Nov-Jun	---	---
Welch-----	B	Rare	---	---	4.0-6.0	Apparent	Mar-Jun	---	---
1730: McIvey-----	C	None	---	---	>6.0	---	---	---	---
Donna-----	D	None	---	---	>6.0	---	---	---	---
1731: McIvey-----	C	None	---	---	>6.0	---	---	---	---
Chen-----	D	None	---	---	>6.0	---	---	---	---
Donna-----	D	None	---	---	>6.0	---	---	---	---
1732: McIvey-----	C	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
1732 (con.): Stampede-----	D	None	---	---	>6.0	---	---	---	---
Heechee-----	B	None	---	---	>6.0	---	---	---	---
1740: Slipback-----	B	None	---	---	>6.0	---	---	---	---
Welch-----	C	Rare	---	---	4.0-6.0	Apparent	Nov-Jun	---	---
1741: Slipback-----	B	None	---	---	>6.0	---	---	---	---
Shantown-----	A	None	---	---	>6.0	---	---	---	---
Toba-----	B	Frequent	Long	Mar-Jun	1.5-2.0	Apparent	Mar-Jun	---	---
1750: Heechee-----	B	None	---	---	>6.0	---	---	---	---
Welch-----	D	Occasional	Brief	Mar-Jun	0.0-1.5	Apparent	Nov-Jun	---	---
Welch-----	B	Rare	---	---	4.0-6.0	Apparent	Mar-Jun	---	---
1760: Lykal-----	C	Rare	---	---	1.5-3.0	Apparent	Mar-May	---	---
Wendane-----	C	Occasional	Long	Dec-Jun	2.5-4.0	Apparent	Feb-Jul	---	---
James Canyon----	D	Occasional	Brief	Mar-May	1.5-2.0	Apparent	Mar-Jun	---	---
1770: Donna-----	D	None	---	---	>6.0	---	---	---	---
McIvey-----	C	None	---	---	>6.0	---	---	---	---
Heechee-----	B	None	---	---	>6.0	---	---	---	---
1780: Schoer-----	C	None	---	---	>6.0	---	---	---	---
Welch-----	D	Occasional	Brief	Mar-Jun	0.0-1.5	Apparent	Nov-Jun	---	---
1790: Donna-----	D	None	---	---	>6.0	---	---	---	---
Krenka-----	B	None	---	---	>6.0	---	---	---	---
McIvey-----	C	None	---	---	>6.0	---	---	---	---
1800: Chen-----	D	None	---	---	>6.0	---	---	---	---
Graley-----	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop.									
1810: Sumine-----	C	None	---	---	>6.0	---	---	---	---
Tusel-----	B	None	---	---	>6.0	---	---	---	---
Hapgood-----	B	None	---	---	>6.0	---	---	---	---

TABLE 13.--WATER FEATURES--Continued

Map symbol and soil name	Hydro- logic group	Flooding			High water table and ponding				
		Frequency	Duration	Months	Water table depth	Kind of water table	Months	Ponding duration	Maximum ponding depth
					Ft				Ft
1820:									
Hussa-----	D	Frequent	Brief	Mar-Jun	0.5-1.5	Apparent	Mar-Jun	---	---
Halleck-----	C	Frequent	Long	Mar-Jun	1.5-2.5	Apparent	Feb-Jul	---	---
Welsum-----	D	Frequent	Brief	Mar-May	0.0-1.5	Apparent	Feb-Jun	---	---
1831:									
Enko-----	C	None	---	---	>6.0	---	---	---	---
Kelk-----	C	None	---	---	>6.0	---	---	---	---
Enko-----	C	None	---	---	>6.0	---	---	---	---
1840:									
Amene-----	D	None	---	---	>6.0	---	---	---	---
Belsac-----	B	None	---	---	>6.0	---	---	---	---
Chen-----	D	None	---	---	>6.0	---	---	---	---
1850:									
Bullump-----	B	None	---	---	>6.0	---	---	---	---
Cleavage-----	D	None	---	---	>6.0	---	---	---	---
Rock Outcrop.									
1861:									
Equis-----	D	Rare	---	---	1.0-3.0	Apparent	Feb-Apr	---	---
Devilsgait-----	D	Frequent	Long	Mar-Jun	0.0-1.5	Apparent	Feb-Jul	---	---
1862:									
Equis-----	D	Rare	---	---	1.0-3.0	Apparent	Feb-Apr	---	---
Equis-----	D	Rare	---	---	1.0-3.0	Apparent	Feb-Apr	---	---
Kolda-----	D	None	---	---	0.0-1.5	Apparent	Oct-Jun	---	---

TABLE 14.--SOIL FEATURES

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
0053: Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Urmafot-----	9-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0062: Amtoft-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Moderate
Rock Outcrop---	---	---	---	---	---	---	---	---	---
Amtoft-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Moderate
0066: Zimbob-----	10-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Zimbob-----	4-10	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0067: Tecomar-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Tecomar-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Pockaloo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0069: Zimbob-----	10-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Hyzen-----	6-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Rock Outcrop---	---	---	---	---	---	---	---	---	---
0070: Stewval-----	4-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Low
Eastwell-----	10-20	Duripan	4-17	Indurated	0	---	Low	High	Low
0071: Stewval-----	4-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Low
Wesfil-----	4-10	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Rock Outcrop---	---	---	---	---	---	---	---	---	---
0080: Stewval-----	4-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Low
0092: Wesfil-----	4-10	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Wintermute-----	---	---	---	---	0	---	Low	High	Low
Okan-----	---	---	---	---	0	---	Moderate	High	Low
0098: Wesfil-----	4-10	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Tarnach-----	10-20	---	---	---	0	---	Moderate	High	Low
Wesfil-----	4-10	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0099: Wesfil-----	4-10	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Armespan-----	---	---	---	---	0	---	Moderate	High	Low
Heist-----	---	---	---	---	0	---	Moderate	High	Low

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
0100:									
Benin-----	---	---	---	---	0	---	Low	High	High
Mazuma-----	---	---	---	---	0	---	Low	High	High
0101:									
Toano-----	---	---	---	---	0	---	Low	High	Moderate
Linoyer-----	---	---	---	---	0	---	Low	High	Moderate
0103:									
Benin-----	---	---	---	---	0	---	Low	High	High
Playas-----	---	---	---	---	0	---	None	High	High
0111:									
Gravier-----	---	---	---	---	0	---	Low	High	Low
Armespan-----	---	---	---	---	0	---	Moderate	High	Low
113:									
Gravier-----	---	---	---	---	0	---	Low	High	Low
Gravier-----	---	---	---	---	0	---	Low	High	Low
Jericho-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Moderate
0116:									
Gravier-----	---	---	---	---	0	---	Low	High	Low
Izamatch-----	---	---	---	---	0	---	Low	High	Low
Loray-----	---	---	---	---	0	---	Low	High	Low
0118:									
Gravier-----	---	---	---	---	0	---	Low	High	Low
Automal-----	---	---	---	---	0	---	Moderate	High	Low
Zerk-----	---	---	---	---	0	---	Low	High	Low
0119:									
Wintermute-----	---	---	---	---	0	---	Low	High	Low
Linoyer-----	---	---	---	---	0	---	Low	High	Moderate
0120:									
Izamatch-----	---	---	---	---	0	---	Low	High	Low
Armespan-----	---	---	---	---	0	---	Moderate	High	Low
Cliffdown-----	---	---	---	---	0	---	Low	High	High
0122:									
Gravier-----	---	---	---	---	0	---	Low	High	Low
Izamatch-----	---	---	---	---	0	---	Low	High	Low
0130:									
Tooele-----	---	---	---	---	0	---	Low	High	High
Benin-----	---	---	---	---	0	---	Low	High	High
0140:									
Gollaher-----	4-10	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Belsac-----	25-40	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
0151: Hopeka-----	4-10	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Amene-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Rock Outcrop----	---	---	---	---	---	---	---	---	---
0154: Hopeka-----	4-10	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Tecomar-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0160: Saltair-----	---	---	---	---	0	---	High	High	High
Kawich-----	---	---	---	---	0	---	Low	High	High
0161: Saltair-----	---	---	---	---	0	---	High	High	High
Playas-----	---	---	---	---	0	---	None	High	High
0171: Loray-----	---	---	---	---	0	---	Low	High	Low
Gravier-----	---	---	---	---	0	---	Low	High	Low
Toano-----	---	---	---	---	0	---	Low	High	Moderate
0173: Cliffdown-----	---	---	---	---	0	---	Low	High	High
Armespan-----	---	---	---	---	0	---	Moderate	High	Low
Izamatch-----	---	---	---	---	0	---	Low	High	Low
0174: Wintermute-----	---	---	---	---	0	---	Low	High	Low
Linoyer-----	---	---	---	---	0	---	Low	High	Moderate
Okan-----	---	---	---	---	0	---	Moderate	High	Low
0175: Loray-----	---	---	---	---	0	---	Low	High	Low
Wintermute-----	---	---	---	---	0	---	Low	High	Low
0176: Loray-----	---	---	---	---	0	---	Low	High	Low
Zerk-----	---	---	---	---	0	---	Low	High	Low
Zerk-----	---	---	---	---	0	---	Low	High	Low
0181: Peeko-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Dewar-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Peeko-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0182: Peeko-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Peeko-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Gance-----	---	---	---	---	0	---	Low	High	Low

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
0183: Peeko-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Enko-----	---	---	---	---	0	---	Moderate	High	Low
Izar-----	7-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0185: Peeko-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Peeko-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Chiara-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0186: Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Pharo-----	---	---	---	---	0	---	Moderate	High	Low
Hundraw-----	4-10	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
0187: Peeko-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Izar-----	7-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Izar-----	7-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0188: Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Automal-----	---	---	---	---	0	---	Moderate	High	Low
Izar-----	7-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0192: Hutchley-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Low
Simon-----	---	---	---	---	0	---	Moderate	Moderate	Low
0201: Tecomar-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Hopeka-----	4-10	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Rock Outcrop----	---	---	---	---	---	---	---	---	---
0203: Tecomar-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Pookaloo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Pharo-----	---	---	---	---	0	---	Moderate	High	Low
0210: Mazuma-----	---	---	---	---	0	---	Low	High	High
Hardhat-----	---	---	---	---	0	---	Low	High	High
Loray-----	---	---	---	---	0	---	Low	High	Low
0211: Valmy-----	---	---	---	---	0	---	Low	High	High
Enko-----	---	---	---	---	0	---	Moderate	High	Low

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
0230: Zafod-----	20-40	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0231: Dacker-----	20-35	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Nevador-----	---	---	---	---	0	---	Moderate	High	Low
Kelk-----	---	---	---	---	0	---	Moderate	High	Low
0240: Hundraw-----	4-10	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Cobre-----	20-40	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
0241: Hundraw-----	4-10	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Peeko-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Kzin-----	4-12	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
0242: Cobre-----	20-40	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Hundraw-----	4-10	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Chiara-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0244: Hundraw-----	4-10	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Shabliss-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0250: Izar-----	7-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Holborn-----	6-10	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Kzin-----	4-12	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
0251: Izar-----	7-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Shabliss-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
0252: Izar-----	7-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Hundraw-----	4-10	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Okan-----	---	---	---	---	0	---	Moderate	High	Low
0260: Dewar-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Chiara-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Hunnton-----	20-40	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0270: Chiara-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Kelk-----	---	---	---	---	0	---	Moderate	High	Low
Kelk-----	---	---	---	---	0	---	Moderate	High	Low
0273: Chiara-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Dewar-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Enko-----	---	---	---	---	0	---	Moderate	High	Low
0276: Chiara-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Peeko-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Urmafot-----	9-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0279: Chiara-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Parisa-----	20-40	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Enko-----	---	---	---	---	0	---	Moderate	High	Low
0280: Oupico-----	20-40	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Enko-----	---	---	---	---	0	---	Moderate	High	Low
0282: Shabliss-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
Okan-----	---	---	---	---	0	---	Moderate	High	Low
0310: Sonoma-----	---	---	---	---	0	---	High	High	Low
Devilsgait-----	---	---	---	---	0	---	High	High	Low
Sonoma-----	---	---	---	---	0	---	High	High	Low
0311: Sonoma-----	---	---	---	---	0	---	High	High	Low
Kelk-----	---	---	---	---	0	---	Moderate	High	Low

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
0330: Kzin-----	4-12	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Holborn-----	6-10	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Kzin-----	4-12	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
0331: Kzin-----	4-12	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Cobre-----	20-40	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Jackpot-----	10-20	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	Moderate	Low
0333: Kzin-----	4-12	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Holborn-----	6-10	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Onkeyo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0340: Shuttle-----	40-60	Duripan	4-17	Indurated	0	---	Low	High	High
Hardhat-----	---	---	---	---	0	---	Low	High	High
Shuttle-----	---	---	---	---	0	---	Low	High	High
0350: Jericho-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Moderate
Jericho-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Moderate
0351: Shabliss-----	10-20	Duripan	0-3	Indurated	0	---	Moderate	High	Low
Okan-----	---	---	---	---	0	---	Moderate	High	Low
Eastwall-----	10-20	Duripan	4-17	Indurated	0	---	Low	High	Low
0355: Shabliss-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Okan-----	---	---	---	---	0	---	Moderate	High	Low
Okan-----	---	---	---	---	0	---	Moderate	High	Low
0370: Toano-----	---	---	---	---	0	---	Low	High	Moderate
Tulase-----	---	---	---	---	0	---	Moderate	High	Low
0371: Linoyer-----	---	---	---	---	0	---	Low	High	Moderate
Okan-----	---	---	---	---	0	---	Moderate	High	Low

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
0373: Timpie-----	---	---	---	---	0	---	High	High	High
Piltown-----	---	---	---	---	0	---	Low	High	Low
Lincyer-----	---	---	---	---	0	---	Low	High	Moderate
0374: Heist-----	---	---	---	---	0	---	Moderate	High	Low
Okan-----	---	---	---	---	0	---	Moderate	High	Low
Zerk-----	---	---	---	---	0	---	Low	High	Low
0375: Toano-----	---	---	---	---	0	---	Low	High	Moderate
Heist-----	---	---	---	---	0	---	Moderate	High	Low
0380: Cobre-----	20-40	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Izar-----	7-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Jackpot-----	10-20	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	Moderate	Low
0381: Cobre-----	20-40	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Hundraw-----	4-10	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Jackpot-----	10-20	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	Moderate	Low
0382: Cobre-----	20-40	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Enko-----	---	---	---	---	0	---	Moderate	High	Low
0390: Hardol-----	---	---	---	---	0	---	Moderate	High	Low
Muiral-----	20-40	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Moderate
Rubble Land----	40-40	Bedrock (lithic)	---	Indurated	0	---	None	---	---
0392: Hardol-----	---	---	---	---	0	---	Moderate	High	Low
Muiral-----	20-40	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Moderate
Onkeyo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0400: Cleavage-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Low
Cleavage-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Low
Sumine-----	20-40	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Low
410: Jericho-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Moderate

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
411: Jericho-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Moderate
Armespan-----	---	---	---	---	0	---	Moderate	High	Low
0420: Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0421: Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Automal-----	---	---	---	---	0	---	Moderate	High	Low
0422: Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Zimboob-----	10-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Okan-----	---	---	---	---	0	---	Moderate	High	Low
0424: Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Hundraw-----	4-10	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Okan-----	---	---	---	---	0	---	Moderate	High	Low
0426: Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Automal-----	---	---	---	---	0	---	Moderate	High	Low
Wintermute-----	---	---	---	---	0	---	Low	High	Low
0429: Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Automal-----	---	---	---	---	0	---	Moderate	High	Low
Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0430: Graley-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Low
Pioche-----	6-15	Bedrock (lithic)	---	Indurated	0	---	Low	Moderate	Low
Cropper-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Low
0431: Graley-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Low
Chen-----	12-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Low
McIvey-----	---	---	---	---	0	---	Moderate	Moderate	Low
0440: Lomoine-----	4-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Bijorja-----	20-40	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Lomoine-----	4-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
0460:									
Okan-----	---	---	---	---	0	---	Moderate	High	Low
Automal-----	---	---	---	---	0	---	Moderate	High	Low
Hundraw-----	4-10	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
0470:									
Rozara-----	10-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Low
Cucamungo-----	14-20	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Rock Outcrop----	---	---	---	---	---	---	---	---	---
0471:									
Cucamungo-----	14-20	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Hendap-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Low
Rock Outcrop----	---	---	---	---	---	---	---	---	---
0480:									
Shabliss-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0485:									
Shabliss-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Parisa-----	20-40	Duripan	---	Indurated	0	---	Moderate	High	Low
Hunnton-----	20-40	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0490:									
Wintermute-----	---	---	---	---	0	---	Low	High	Low
Automal-----	---	---	---	---	0	---	Moderate	High	Low
0492:									
Wintermute-----	---	---	---	---	0	---	Low	High	Low
Peeko-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Hundraw-----	4-10	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
0494:									
Wintermute-----	---	---	---	---	0	---	Low	High	Low
Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
Automal-----	---	---	---	---	0	---	Moderate	High	Low
0496:									
Sodhouse-----	14-20	Duripan	4-17	Indurated	0	---	Low	High	Low
Sodhouse-----	14-20	Duripan	4-17	Indurated	0	---	Low	High	Low
Linoyar-----	---	---	---	---	0	---	Low	High	Moderate

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
0497:									
Sodhouse-----	14-20	Duripan	4-17	Indurated	0	---	Low	High	Low
Sodhouse-----	14-20	Duripan	4-17	Indurated	0	---	Low	High	Low
Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0501:									
Pharo-----	---	---	---	---	0	---	Moderate	High	Low
Izar-----	7-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Okan-----	---	---	---	---	0	---	Moderate	High	Low
0503:									
Automal-----	---	---	---	---	0	---	Moderate	High	Low
Okan-----	---	---	---	---	0	---	Moderate	High	Low
Wintermute----	---	---	---	---	0	---	Low	High	Low
0504:									
Automal-----	---	---	---	---	0	---	Moderate	High	Low
Wintermute----	---	---	---	---	0	---	Low	High	Low
0510:									
Adobe-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Hardzem-----	20-40	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	Moderate	Low
Haunchee-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0511:									
Adobe-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Wardbay-----	40-60	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Hardol-----	---	---	---	---	0	---	Moderate	High	Low
0512:									
Adobe-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Cavehill-----	20-40	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Wardbay-----	40-60	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0520:									
Haunchee-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Muiral-----	20-40	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Moderate
Wardbay-----	40-60	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0530:									
Wardbay-----	40-60	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Adobe-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Haunchee-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0532:									
Onkeyo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Pookaloo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Tecomar-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
0540:									
Kunzler-----	---	---	---	---	0	---	Moderate	High	Moderate
Sycomat-----	---	---	---	---	0	---	Low	High	Low
0541:									
Kunzler-----	---	---	---	---	0	---	Moderate	High	Moderate
Sheffit-----	---	---	---	---	0	---	Moderate	High	High
0550:									
Urmafot-----	9-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Bobs-----	10-20	Petrocalcic	4-17	---	0	---	Moderate	High	Low
Urmafot-----	9-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0551:									
Urmafot-----	9-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Bobs-----	10-20	Petrocalcic	4-17	---	0	---	Moderate	High	Low
552:									
Urmafot-----	9-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Pharo-----	---	---	---	---	0	---	Moderate	High	Low
0554:									
Urmafot-----	9-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Tecomar-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Urmafot-----	9-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0561:									
Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Urmafot-----	9-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0562:									
Bobs-----	10-20	Petrocalcic	4-17	---	0	---	Moderate	High	Low
0563:									
Bobs-----	10-20	Petrocalcic	4-17	---	0	---	Moderate	High	Low
Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
0575:									
Pookaloo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Cavehill-----	20-40	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Rock Outcrop---	---	---	---	---	---	---	---	---	---
0576:									
Pookaloo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Tecomar-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Onkeyo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
0582: Sheffit-----	---	---	---	---	0	---	Moderate	High	High
Sheffit-----	---	---	---	---	0	---	Moderate	High	High
Katelana-----	---	---	---	---	0	---	Moderate	High	High
0590: Upatad-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Segura-----	7-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0600: Onkeyo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Amene-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Pookaloo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0610: Wintermute-----	---	---	---	---	0	---	Low	High	Low
Eastwell-----	10-20	Duripan	4-17	Indurated	0	---	Low	High	Low
0614: Wintermute-----	---	---	---	---	0	---	Low	High	Low
Eastwell-----	10-20	Duripan	4-17	Indurated	0	---	Low	High	Low
Zerk-----	---	---	---	---	0	---	Low	High	Low
0617: Wintermute-----	---	---	---	---	0	---	Low	High	Low
Zerk-----	---	---	---	---	0	---	Low	High	Low
Loray-----	---	---	---	---	0	---	Low	High	Low
0620: Atlow-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Atlow-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0631: Eastwell-----	10-20	Duripan	4-17	Indurated	0	---	Low	High	Low
Wintermute-----	---	---	---	---	0	---	Low	High	Low
Okan-----	---	---	---	---	0	---	Moderate	High	Low
0632: Eastwell-----	10-20	Duripan	4-17	Indurated	0	---	Low	High	Low
Zafod-----	20-40	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0634: Eastwell-----	10-20	Duripan	4-17	Indurated	0	---	Low	High	Low
Shabliss-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Izar-----	7-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
0636: Eastwell-----	10-20	Duripan	4-17	Indurated	0	---	Low	High	Low
Hundraw-----	4-10	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Okan-----	---	---	---	---	0	---	Moderate	High	Low
0650: Mizpah-----	20-40	Bedrock (paralithic)	---	Moderately cemented	0	---	Low	High	Low
Zerk-----	---	---	---	---	0	---	Low	High	Low
Wintermute-----	---	---	---	---	0	---	Low	High	Low
0671: Idway-----	---	---	---	---	0	---	Moderate	High	Low
Mysol-----	---	---	---	---	0	---	Moderate	High	High
0672: Idway-----	---	---	---	---	0	---	Moderate	High	Low
James Canyon---	---	---	---	---	0	---	High	Moderate	Low
0680: Simon-----	---	---	---	---	0	---	Moderate	Moderate	Low
Graley-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Low
Chen-----	12-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Low
0691: Tarnach-----	10-20	---	---	---	0	---	Moderate	High	Low
Tarnach-----	10-20	---	---	---	0	---	Moderate	High	Low
Wesfil-----	4-10	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0692: Tarnach-----	10-20	---	---	---	0	---	Moderate	High	Low
Upatad-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Wesfil-----	4-10	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0700: Shabliss-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Tulase-----	---	---	---	---	0	---	Moderate	High	Low
Linoyer-----	---	---	---	---	0	---	Low	High	Moderate
0720: Mysol-----	---	---	---	---	0	---	Moderate	High	High
Mysol-----	---	---	---	---	0	---	Moderate	High	High
0730: Idway-----	---	---	---	---	0	---	Moderate	High	Low
Kawich-----	---	---	---	---	0	---	Low	High	High
Mysol-----	---	---	---	---	0	---	Moderate	High	High

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
0733:									
Idway-----	---	---	---	---	0	---	Moderate	High	Low
Idway-----	---	---	---	---	0	---	Moderate	High	Low
Mysol-----	---	---	---	---	0	---	Moderate	High	High
0740:									
Upatad-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Pioche-----	6-15	Bedrock (lithic)	---	Indurated	0	---	Low	Moderate	Low
Tarnach-----	10-20	---	---	---	0	---	Moderate	High	Low
0760:									
Playas-----	---	---	---	---	0	---	None	High	High
0761:									
Umberland-----	---	---	---	---	0	---	High	High	High
Umberland-----	---	---	---	---	0	---	High	High	High
0762:									
Umberland-----	---	---	---	---	0	---	High	High	High
Playas-----	---	---	---	---	0	---	None	High	High
0763:									
Equis-----	---	---	---	---	0	---	Moderate	High	High
Umberland-----	---	---	---	---	0	---	High	High	High
Duffer-----	---	---	---	---	0	---	High	High	High
0764:									
Umberland-----	---	---	---	---	0	---	High	High	High
Rubylake-----	---	---	---	---	0	---	High	High	High
Orupa-----	---	---	---	---	0	---	Moderate	High	High
0765:									
Umberland-----	---	---	---	---	0	---	High	High	High
Umberland-----	---	---	---	---	0	---	High	High	High
Wendane-----	---	---	---	---	0	---	High	High	High
0767:									
Umberland-----	---	---	---	---	0	---	High	High	High
Umberland-----	---	---	---	---	0	---	High	High	High
Orupa-----	---	---	---	---	0	---	Moderate	High	High
0781:									
Mysol-----	---	---	---	---	0	---	Moderate	High	High
Benin-----	---	---	---	---	0	---	Low	High	High
Wendane-----	---	---	---	---	0	---	High	High	High
0800:									
Mazuma-----	---	---	---	---	0	---	Low	High	High
Toano-----	---	---	---	---	0	---	Low	High	Moderate

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
0801:									
Mazuma-----	---	---	---	---	0	---	Low	High	High
Zerk-----	---	---	---	---	0	---	Low	High	Low
Okan-----	---	---	---	---	0	---	Moderate	High	Low
0804:									
Mazuma-----	---	---	---	---	0	---	Low	High	High
Kawich-----	---	---	---	---	0	---	Low	High	High
Playas-----	---	---	---	---	0	---	None	High	High
0807:									
Mazuma-----	---	---	---	---	0	---	Low	High	High
Kunzler-----	---	---	---	---	0	---	Moderate	High	Moderate
Zerk-----	---	---	---	---	0	---	Low	High	Low
0823:									
Kunzler-----	---	---	---	---	0	---	Moderate	High	Moderate
Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
Blimo-----	---	---	---	---	0	---	Moderate	High	High
0824:									
Kunzler-----	---	---	---	---	0	---	Moderate	High	Moderate
Katelana-----	---	---	---	---	0	---	Moderate	High	High
0827:									
Kunzler-----	---	---	---	---	0	---	Moderate	High	Moderate
James Canyon---	---	---	---	---	0	---	High	Moderate	Low
James Canyon---	---	---	---	---	0	---	High	Moderate	Low
0828:									
Kunzler-----	---	---	---	---	0	---	Moderate	High	Moderate
Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
Wendane-----	---	---	---	---	0	---	High	High	High
0830:									
Pharo-----	---	---	---	---	0	---	Moderate	High	Low
Kzin-----	4-12	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Pharo-----	---	---	---	---	0	---	Moderate	High	Low
0842:									
Katelana-----	---	---	---	---	0	---	Moderate	High	High
Timpie-----	---	---	---	---	0	---	High	High	High
0843:									
Katelana-----	---	---	---	---	0	---	Moderate	High	High
Kawich-----	---	---	---	---	0	---	Low	High	High

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
0845:									
Katelana-----	---	---	---	---	0	---	Moderate	High	High
Ragtown-----	---	---	---	---	0	---	Low	High	High
Timpie-----	---	---	---	---	0	---	High	High	High
0847:									
Mazuma-----	---	---	---	---	0	---	Low	High	High
Blimo-----	---	---	---	---	0	---	Moderate	High	High
Wintermute-----	---	---	---	---	0	---	Low	High	Low
0850:									
Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Wintermute-----	---	---	---	---	0	---	Low	High	Low
Okan-----	---	---	---	---	0	---	Moderate	High	Low
0851:									
Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Zimbob-----	4-10	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Tecomar-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0852:									
Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
Shabliss-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0854:									
Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Automal-----	---	---	---	---	0	---	Moderate	High	Low
Shabliss-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0856:									
Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Parisa-----	20-40	Duripan	4-17	Indurated	0	---	Moderate	High	Low
0857:									
Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Shabliss-----	10-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Linoyer-----	---	---	---	---	0	---	Low	High	Moderate
0858:									
Palinor-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Automal-----	---	---	---	---	0	---	Moderate	High	Low
Linoyer-----	---	---	---	---	0	---	Low	High	Moderate
0870:									
Theriot-----	4-20	Bedrock (lithic)	---	Indurated	0	---	Low	High	Low
Zimbob-----	10-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
0880:									
Duffer-----	---	---	---	---	0	---	High	High	High
Duffer-----	---	---	---	---	0	---	High	High	High
Kolda-----	---	---	---	---	0	---	High	High	High
0881:									
Duffer-----	---	---	---	---	0	---	High	High	High
Kunzler-----	---	---	---	---	0	---	Moderate	High	Moderate
0882:									
Duffer-----	---	---	---	---	0	---	High	High	High
Kolda-----	---	---	---	---	0	---	High	High	High
0894:									
Zerk-----	---	---	---	---	0	---	Low	High	Low
Threeses-----	---	---	---	---	0	---	Low	High	Low
Mazuma-----	---	---	---	---	0	---	Low	High	High
0900:									
Zerk-----	---	---	---	---	0	---	Low	High	Low
Automal-----	---	---	---	---	0	---	Moderate	High	Low
Linoyer-----	---	---	---	---	0	---	Low	High	Moderate
0910:									
Ragtown-----	---	---	---	---	0	---	Low	High	High
Ragtown-----	---	---	---	---	0	---	Low	High	High
0912:									
Katelana-----	---	---	---	---	0	---	Moderate	High	High
Katelana-----	---	---	---	---	0	---	Moderate	High	High
0914:									
Katelana-----	---	---	---	---	0	---	Moderate	High	High
Benin-----	---	---	---	---	0	---	Low	High	High
Sheffit-----	---	---	---	---	0	---	Moderate	High	High
0917:									
Katelana-----	---	---	---	---	0	---	Moderate	High	High
Sheffit-----	---	---	---	---	0	---	Moderate	High	High
Ragtown-----	---	---	---	---	0	---	Low	High	High
0918:									
Katelana-----	---	---	---	---	0	---	Moderate	High	High
Zorravista-----	---	---	---	---	0	---	Low	Moderate	Low
Playas-----	---	---	---	---	0	---	None	High	High
0930:									
Okan-----	---	---	---	---	0	---	Moderate	High	Low
Toano-----	---	---	---	---	0	---	Low	High	Moderate
Loray-----	---	---	---	---	0	---	Low	High	Low

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
0932:									
Okan-----	---	---	---	---	0	---	Moderate	High	Low
Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
0941:									
Sheffit-----	---	---	---	---	0	---	Moderate	High	High
Sheffit-----	---	---	---	---	0	---	Moderate	High	High
Zorravista----	---	---	---	---	0	---	Low	Moderate	Low
0943:									
Sheffit-----	---	---	---	---	0	---	Moderate	High	High
Umlerland-----	---	---	---	---	0	---	High	High	High
0960:									
Gravier-----	---	---	---	---	0	---	Low	High	Low
Zerk-----	---	---	---	---	0	---	Low	High	Low
0961:									
Gravier-----	---	---	---	---	0	---	Low	High	Low
Piltown-----	---	---	---	---	0	---	Low	High	Low
Zerk-----	---	---	---	---	0	---	Low	High	Low
0972:									
Zimbob-----	10-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Zimbob-----	4-10	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Pookaloo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0974:									
Zimbob-----	10-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Tecomar-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Pookaloo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0975:									
Zimbob-----	10-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Tecomar-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Tecomar-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0980:									
Onkeyo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Pookaloo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Zimbob-----	10-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0990:									
Hyzen-----	6-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Zimbob-----	4-10	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
0991:									
Hyzen-----	6-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Cavehill-----	20-40	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Tecomar-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1000: Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
Zerk-----	---	---	---	---	0	---	Low	High	Low
1001: Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
Okan-----	---	---	---	---	0	---	Moderate	High	Low
Eastwell-----	10-20	Duripan	4-17	Indurated	0	---	Low	High	Low
1002: Threesee-----	---	---	---	---	0	---	Low	High	Low
Kunzler-----	---	---	---	---	0	---	Moderate	High	Moderate
Threesee-----	---	---	---	---	0	---	Low	High	Low
1003: Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
Hundraw-----	4-10	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Tulase-----	---	---	---	---	0	---	Moderate	High	Low
1004: Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
Parisa-----	20-40	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Tulase-----	---	---	---	---	0	---	Moderate	High	Low
1005: Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
Zerk-----	---	---	---	---	0	---	Low	High	Low
Parisa-----	20-40	Duripan	4-17	Indurated	0	---	Moderate	High	Low
1006: Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
Blimo-----	---	---	---	---	0	---	Moderate	High	High
1007: Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
Parisa-----	20-40	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Automal-----	---	---	---	---	0	---	Moderate	High	Low
1009: Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
Tulase-----	---	---	---	---	0	---	Moderate	High	Low
Wintermute-----	---	---	---	---	0	---	Low	High	Low
1020: Okan-----	---	---	---	---	0	---	Moderate	High	Low
Eastwell-----	10-20	Duripan	4-17	Indurated	0	---	Low	High	Low
Blimo-----	---	---	---	---	0	---	Moderate	High	High

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1023:									
Okan-----	---	---	---	---	0	---	Moderate	High	Low
Okan-----	---	---	---	---	0	---	Moderate	High	Low
Katelana-----	---	---	---	---	0	---	Moderate	High	High
1030:									
Segura-----	7-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Bullump-----	40-60	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Low
Hutchley-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Low
1040:									
Segura-----	7-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Pioche-----	6-15	Bedrock (lithic)	---	Indurated	0	---	Low	Moderate	Low
Chen-----	12-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	Moderate	Low
1061:									
Pioche-----	6-15	Bedrock (lithic)	---	Indurated	0	---	Low	Moderate	Low
Cucamungo-----	14-20	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	High	Low
Rock Outcrop---	---	---	---	---	---	---	---	---	---
1070:									
Zafod-----	20-40	Duripan	4-17	Indurated	0	---	Moderate	High	Low
Automal-----	---	---	---	---	0	---	Moderate	High	Low
Okan-----	---	---	---	---	0	---	Moderate	High	Low
1080:									
Cotant-----	12-20	Bedrock (paralithic)	---	Moderately cemented	0	---	Low	Moderate	Low
Segura-----	7-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
1111:									
Parisa-----	20-40	Duripan	4-17	Indurated	0	---	Moderate	High	Low
1120:									
Okan-----	---	---	---	---	0	---	Moderate	High	Low
Automal-----	---	---	---	---	0	---	Moderate	High	Low
1150:									
Adobe-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Wardbay-----	40-60	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Haunchee-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
1161:									
Pharo-----	---	---	---	---	0	---	Moderate	High	Low
Bobs-----	10-20	Petrocalcic	4-17	---	0	---	Moderate	High	Low
Pookaloo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1171:									
Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
Automal-----	---	---	---	---	0	---	Moderate	High	Low
Gravier-----	---	---	---	---	0	---	Low	High	Low
1172:									
Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
Automal-----	---	---	---	---	0	---	Moderate	High	Low
Automal-----	---	---	---	---	0	---	Moderate	High	Low
1173:									
Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
Automal-----	---	---	---	---	0	---	Moderate	High	Low
1174:									
Pyrat-----	---	---	---	---	0	---	Moderate	High	Low
Tosser-----	---	---	---	---	0	---	Low	High	Moderate
1180:									
Haunchee-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Cavehill-----	20-40	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
1181:									
Haunchee-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Halacan-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Wardbay-----	40-60	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
1190:									
Upatad-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Atlow-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Upatad-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
1191:									
Upatad-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Pioche-----	6-15	Bedrock (lithic)	---	Indurated	0	---	Low	Moderate	Low
Rock Outcrop---	---	---	---	---	---	---	---	---	---
1200:									
Hardol-----	---	---	---	---	0	---	Moderate	High	Low
Hardzem-----	20-40	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	Moderate	Low
Rock Outcrop---	---	---	---	---	---	---	---	---	---
1201:									
Hardol-----	---	---	---	---	0	---	Moderate	High	Low
Rock Outcrop---	---	---	---	---	---	---	---	---	---
Wardbay-----	40-60	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1210: Blimo-----	---	---	---	---	0	---	Moderate	High	High
Kunzler-----	---	---	---	---	0	---	Moderate	High	Moderate
Linoyer-----	---	---	---	---	0	---	Low	High	Moderate
1213: Blimo-----	---	---	---	---	0	---	Moderate	High	High
Threesee-----	---	---	---	---	0	---	Low	High	Low
1215: Blimo-----	---	---	---	---	0	---	Moderate	High	High
Zoravista-----	---	---	---	---	0	---	Low	Moderate	Low
1216: Blimo-----	---	---	---	---	0	---	Moderate	High	High
Idway-----	---	---	---	---	0	---	Moderate	High	Low
Mazuma-----	---	---	---	---	0	---	Low	High	High
1220: Onkeyo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Adobe-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Pookaloo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
1230: Hardzem-----	20-40	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	Moderate	Low
Haunchee-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Wardbay-----	40-60	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
1240: Benin-----	---	---	---	---	0	---	Low	High	High
Benin-----	---	---	---	---	0	---	Low	High	High
1241: Benin-----	---	---	---	---	0	---	Low	High	High
Playas-----	---	---	---	---	0	---	None	High	High
Benin-----	---	---	---	---	0	---	Low	High	High
1250: Tecomar-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Pookaloo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
1270: Katelana-----	---	---	---	---	0	---	Moderate	High	High
Sheffit-----	---	---	---	---	0	---	Moderate	High	High
1271: Uvada-----	---	---	---	---	0	---	Low	High	High
Ragtown-----	---	---	---	---	0	---	Low	High	High

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1272:									
Katelana-----	---	---	---	---	0	---	Moderate	High	High
Kawich-----	---	---	---	---	0	---	Low	High	High
1280:									
Sycomat-----	---	---	---	---	0	---	Low	High	Low
Kunzler-----	---	---	---	---	0	---	Moderate	High	Moderate
1281:									
Sycomat-----	---	---	---	---	0	---	Low	High	Low
Mazuma-----	---	---	---	---	0	---	Low	High	High
1290:									
Heist-----	---	---	---	---	0	---	Moderate	High	Low
Blimo-----	---	---	---	---	0	---	Moderate	High	High
1300:									
Cavehill-----	20-40	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Haunchee-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Hardzem-----	20-40	Bedrock (paralithic)	---	Moderately cemented	0	---	Moderate	Moderate	Low
1360:									
Toba-----	---	---	---	---	0	---	High	High	Moderate
Appian-----	---	---	---	---	0	---	Low	High	Moderate
1370:									
Orupa-----	---	---	---	---	0	---	Moderate	High	High
Playas-----	---	---	---	---	0	---	None	High	High
Boofuss-----	---	---	---	---	0	---	High	High	High
1380:									
Hulderman-----	---	---	---	---	0	---	High	High	Low
Toba-----	---	---	---	---	0	---	High	High	Moderate
Benin-----	---	---	---	---	0	---	Low	High	High
1390:									
Wendane-----	---	---	---	---	0	---	High	High	High
Mysol-----	---	---	---	---	0	---	Moderate	High	High
Toba-----	---	---	---	---	0	---	High	High	Moderate
1410:									
Threesee-----	---	---	---	---	0	---	Low	High	Low
Tosser-----	---	---	---	---	0	---	Low	High	Moderate
1411:									
Threesee-----	---	---	---	---	0	---	Low	High	Low
Linoyer-----	---	---	---	---	0	---	Low	High	Moderate
Okan-----	---	---	---	---	0	---	Moderate	High	Low

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1412:									
Threesee-----	---	---	---	---	0	---	Low	High	Low
Idway-----	---	---	---	---	0	---	Moderate	High	Low
1413:									
Idway-----	---	---	---	---	0	---	Moderate	High	Low
Zorravista-----	---	---	---	---	0	---	Low	Moderate	Low
Kunzler-----	---	---	---	---	0	---	Moderate	High	Moderate
1414:									
Threesee-----	---	---	---	---	0	---	Low	High	Low
Shantown-----	---	---	---	---	0	---	Low	Moderate	Low
Kunzler-----	---	---	---	---	0	---	Moderate	High	Moderate
1430:									
Pookaloo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Tecomar-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Rock Outcrop---	---	---	---	---	---	---	---	---	---
1440:									
Boofuss-----	---	---	---	---	0	---	High	High	High
Boofuss-----	---	---	---	---	0	---	High	High	High
Equis-----	---	---	---	---	0	---	Moderate	High	High
1441:									
Boofuss-----	---	---	---	---	0	---	High	High	High
Wendane-----	---	---	---	---	0	---	High	High	High
Umberland-----	---	---	---	---	0	---	High	High	High
1450:									
Piltown-----	---	---	---	---	0	---	Low	High	Low
Kawich-----	---	---	---	---	0	---	Low	High	High
1460:									
Tosser-----	---	---	---	---	0	---	Low	High	Moderate
Threesee-----	---	---	---	---	0	---	Low	High	Low
1471:									
Timpie-----	---	---	---	---	0	---	High	High	High
Kunzler-----	---	---	---	---	0	---	Moderate	High	Moderate
Threesee-----	---	---	---	---	0	---	Low	High	Low
1480:									
Tulase-----	---	---	---	---	0	---	Moderate	High	Low
Linoyer-----	---	---	---	---	0	---	Low	High	Moderate
1500:									
Tocele-----	---	---	---	---	0	---	Low	High	High
Loray-----	---	---	---	---	0	---	Low	High	Low

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1510: Izamatch-----	---	---	---	---	0	---	Low	High	Low
Cliffdown-----	---	---	---	---	0	---	Low	High	High
1520: Izamatch-----	---	---	---	---	0	---	Low	High	Low
Izamatch-----	---	---	---	---	0	---	Low	High	Low
Luning-----	---	---	---	---	0	---	Low	High	Low
1521: Izamatch-----	---	---	---	---	0	---	Low	High	Low
Izamatch-----	---	---	---	---	0	---	Low	High	Low
Theriot-----	4-20	Bedrock (lithic)	---	Indurated	0	---	Low	High	Low
1522: Izamatch-----	---	---	---	---	0	---	Low	High	Low
Smaug-----	---	---	---	---	0	---	Low	High	Moderate
Badland-----	---	---	---	---	0	---	None	High	High
1530: Theriot-----	4-20	Bedrock (lithic)	---	Indurated	0	---	Low	High	Low
Theriot-----	4-20	Bedrock (lithic)	---	Indurated	0	---	Low	High	Low
Izamatch-----	---	---	---	---	0	---	Low	High	Low
1531: Theriot-----	4-20	Bedrock (lithic)	---	Indurated	0	---	Low	High	Low
Izamatch-----	---	---	---	---	0	---	Low	High	Low
Rock Outcrop----	---	---	---	---	---	---	---	---	---
1532: Theriot-----	4-20	Bedrock (lithic)	---	Indurated	0	---	Low	High	Low
Theriot-----	4-20	Bedrock (lithic)	---	Indurated	0	---	Low	High	Low
Rock Outcrop----	---	---	---	---	---	---	---	---	---
1540: Kyler-----	6-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Antoft-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Moderate
Antoft-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Moderate
1541: Kyler-----	6-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Kyler-----	6-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Rock Outcrop----	---	---	---	---	---	---	---	---	---
1542: Kyler-----	6-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Antoft-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Moderate
Jericho-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Moderate

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1550:									
Jericho-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Moderate
Jericho-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Moderate
1560:									
Toano-----	---	---	---	---	0	---	Low	High	Moderate
Timpia-----	---	---	---	---	0	---	High	High	High
1570:									
Jericho-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Moderate
Xeric Torriorthents--	---	---	---	---	0	---	Low	High	Low
1580:									
Armespan-----	---	---	---	---	0	---	Moderate	High	Low
Jericho-----	14-20	Duripan	4-17	Indurated	0	---	Moderate	High	Moderate
1581:									
Armespan-----	---	---	---	---	0	---	Moderate	High	Low
Kyler-----	6-14	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Heist-----	---	---	---	---	0	---	Moderate	High	Low
1582:									
Armespan-----	---	---	---	---	0	---	Moderate	High	Low
Xeric Torriorthents--	---	---	---	---	0	---	Low	High	Low
1590:									
Luning-----	---	---	---	---	0	---	Low	High	Low
Luning-----	---	---	---	---	0	---	Low	High	Low
Loray-----	---	---	---	---	0	---	Low	High	Low
1591:									
Luning-----	---	---	---	---	0	---	Low	High	Low
Izamat-----	---	---	---	---	0	---	Low	High	Low
Badland-----	---	---	---	---	0	---	None	High	High
1600:									
Eaglepass-----	4-6	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Moderate
Amtoft-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Moderate
1610:									
Xeric Torriorthents--	---	---	---	---	0	---	Low	High	Low
Armespan-----	---	---	---	---	0	---	Moderate	High	Low
Badland-----	0-3	Bedrock (paralithic)	---	Moderately cemented	0	---	None	---	---
1620:									
Kolda-----	---	---	---	---	0	---	High	High	High
Duffer-----	---	---	---	---	0	---	High	High	High
Sonoma-----	---	---	---	---	0	---	High	High	Low

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1621: Kolda-----	---	---	---	---	0	---	High	High	High
Rubylake-----	---	---	---	---	0	---	High	High	High
Kolda-----	---	---	---	---	0	---	High	High	High
1622: Kolda-----	---	---	---	---	0	---	High	High	High
1623: Kolda-----	---	---	---	---	0	---	High	High	High
Water-----	---	---	---	---	---	---	---	---	---
1630: Pookaloo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Cavehill-----	20-40	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Rock Outcrop----	---	---	---	---	---	---	---	---	---
1631: Pookaloo-----	14-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Tecomar-----	10-20	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
Wardbay-----	40-60	Bedrock (lithic)	---	Indurated	0	---	Moderate	High	Low
1640: Jungo-----	---	---	---	---	0	---	Moderate	High	High
Jungo-----	---	---	---	---	0	---	Moderate	High	High
1650: Shantown-----	---	---	---	---	0	---	Low	Moderate	Low
Zorravista-----	---	---	---	---	0	---	Low	Moderate	Low
1651: Shantown-----	---	---	---	---	0	---	Low	Moderate	Low
Shantown-----	---	---	---	---	0	---	Low	Moderate	Low
1660: Wendane-----	---	---	---	---	0	---	High	High	High
Logan-----	---	---	---	---	0	---	High	High	Moderate
1670: Wendane-----	---	---	---	---	0	---	High	High	High
Logan-----	---	---	---	---	0	---	High	High	Moderate
Wendane-----	---	---	---	---	0	---	High	High	High
1680: Rubylake-----	---	---	---	---	0	---	High	High	High
Kolda-----	---	---	---	---	0	---	High	High	High
Wendane-----	---	---	---	---	0	---	High	High	High

TABLE 14.--SOIL FEATURES--Continued

Map symbol and soil name	Restrictions				Subsidence		Potential frost action	Risk of corrosion	
	Depth	Kind	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
	In		In		In	In			
1681:									
Wendane-----	---	---	---	---	0	---	High	High	High
Logan-----	---	---	---	---	0	---	High	High	Moderate
Umlerland-----	---	---	---	---	0	---	High	High	High
1690:									
Krenka-----	---	---	---	---	0	---	Moderate	Moderate	Low
Secrepass-----	---	---	---	---	0	---	Moderate	Moderate	Low
1700:									
Heeschee-----	---	---	---	---	0	---	Moderate	Moderate	Low
Rubicity-----	---	---	---	---	0	---	Moderate	Moderate	Moderate
Heeschee-----	---	---	---	---	0	---	Moderate	Moderate	Low
1702:									
Heeschee-----	---	---	---	---	0	---	Moderate	Moderate	Low
McIvey-----	---	---	---	---	0	---	Moderate	Moderate	Low
Rubicity-----	---	---	---	---	0	---	Moderate	Moderate	Moderate
1710:									
James Canyon----	---	---	---	---	0	---	High	Moderate	Low
Wendane-----	---	---	---	---	0	---	High	High	High
1711:									
James Canyon----	---	---	---	---	0	---	High	Moderate	Low
Wendane-----	---	---	---	---	0	---	High	High	High
Wendane-----	---	---	---	---	0	---	High	High	High
1720:									
Welch-----	---	---	---	---	0	---	High	Moderate	Low
1721:									
Welch-----	---	---	---	---	0	---	High	Moderate	Low
Welsum-----	---	---	---	---	0	---	High	High	Low
1722:									
Welch-----	---	---	---	---	0	---	High	Moderate	Low
Slipback-----	---	---	---	---	0	---	Moderate	High	High
Welch-----	---	---	---	---	0	---	High	Moderate	Low
1723:									
Welch-----	---	---	---	---	0	---	High	Moderate	Low
Welch-----	---	---	---	---	0	---	High	Moderate	Low
1730:									
McIvey-----	---	---	---	---	0	---	Moderate	Moderate	Low
Donna-----	20-36	Duripan	4-17	Indurated	0	---	Moderate	High	Low

[illegible]

TABLE 14.--SOIL FEATURES--Continued

[illegible]

TABLE 15.--CLASSIFICATION OF THE SOILS

(An asterisk in the first column indicates that the soil is a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series)

Soil name	Family or higher taxonomic class
Adobe-----	Loamy-skeletal, carbonatic Lithic Cryoborolls
Amene-----	Loamy-skeletal, carbonatic, frigid Lithic Calcixerolls
Amtoft-----	Loamy-skeletal, carbonatic, mesic Lithic Xerollic Calciorrhids
Appian-----	Fine-loamy over sandy or sandy-skeletal, mixed, mesic Typic Natrargids
Arnespan-----	Loamy-skeletal, mixed, mesic Durixerollic Calciorrhids
Atlow-----	Loamy-skeletal, mixed, mesic Lithic Xerollic Haplargids
Automal-----	Loamy-skeletal, mixed, mesic Durixerollic Calciorrhids
Balsac-----	Loamy-skeletal, mixed Pachic Cryoborolls
Bonin-----	Fine, montmorillonitic (calcareous), mesic Typic Torriorthents
Bijorja-----	Coarse-loamy, mixed, mesic Xerollic Camborhids
Blimo-----	Coarse-loamy, mixed (calcareous), mesic Durorthidic Xeric Torriorthents
Bobs-----	Loamy, carbonatic, frigid, shallow Petrocalcic Paleixerolls
Boofuss-----	Clayey over loamy, montmorillonitic (calcareous), mesic Typic Halaquepts
Bullump-----	Loamy-skeletal, mixed, frigid Pachic Argixerolls
Cavehill-----	Loamy-skeletal, carbonatic, frigid Typic Calcixerolls
Chen-----	Clayey-skeletal, montmorillonitic, frigid Lithic Argixerolls
Chiara-----	Loamy, mixed, mesic, shallow Xerollic Durorhids
Cleavage-----	Loamy-skeletal, mixed, frigid Lithic Argixerolls
Cliffdown-----	Loamy-skeletal, mixed (calcareous), mesic Typic Torriorthents
Cobre-----	Ashy, mesic Vitrixerandic Camborhids
Cotant-----	Clayey, montmorillonitic, frigid, shallow Aridic Argixerolls
Cropper-----	Loamy-skeletal, mixed, frigid Lithic Argixerolls
Cucamungo-----	Loamy-skeletal, mixed, frigid, shallow Typic Argixerolls
Dacker-----	Fine-loamy, mixed, mesic Xerollic Durargids
Devilsgait-----	Fine-silty, mixed (calcareous), mesic Cumulic Endoaquolls
Dewar-----	Loamy, mixed, mesic, shallow Xerollic Durargids
Donna-----	Very-fine, montmorillonitic, frigid Abruptic Aridic Durixerolls
Duffer-----	Fine-silty, carbonatic, mesic Aquic Calciorrhids
Eaglepass-----	Loamy-skeletal, carbonatic, mesic Lithic Xeric Torriorthents
Eastwell-----	Loamy-skeletal, mixed, mesic, shallow Haploxerollic Durorhids
Enko-----	Coarse-loamy, mixed, mesic Durixerollic Camborhids
Equis-----	Fine, carbonatic, mesic Typic Halaquepts
Gance-----	Clayey-skeletal, montmorillonitic, mesic Durixerollic Haplargids
Gollaher-----	Loamy-skeletal, carbonatic, frigid Lithic Xerorhents
Graley-----	Clayey-skeletal, montmorillonitic, frigid Lithic Argixerolls
Gravier-----	Loamy-skeletal, mixed, mesic Typic Calciorrhids
Halacan-----	Loamy-skeletal, carbonatic Cryic Lithic Rendolls
Halleck-----	Fine-silty, mixed (calcareous), frigid Cumulic Endoaquolls
Hapgood-----	Loamy-skeletal, mixed Pachic Cryoborolls
Hardhat-----	Coarse-loamy, mixed (calcareous), mesic Durorthidic Torriorthents
Hardol-----	Loamy-skeletal, carbonatic Calcic Pachic Cryoborolls
Hardzem-----	Loamy-skeletal, mixed Typic Cryoborolls
Haunchee-----	Loamy-skeletal, carbonatic Cryic Lithic Rendolls
Heechee-----	Loamy-skeletal, mixed, frigid Typic Argixerolls
Heist-----	Coarse-loamy, mixed (calcareous), mesic Xeric Torriorthents
Hendap-----	Loamy-skeletal, mixed, mesic Lithic Haploxerolls
Holborn-----	Loamy, mixed (calcareous), mesic, shallow Xeric Torriorthents
Hopeka-----	Loamy-skeletal, carbonatic, frigid Lithic Xeric Torriorthents
Hulderman-----	Fine-loamy over sandy or sandy-skeletal, mixed, mesic Duric Endoaquolls
Hundraw-----	Loamy, mixed (calcareous), mesic, shallow Xeric Torriorthents
Hunnton-----	Fine, montmorillonitic, mesic Xerollic Durargids
Hussa-----	Fine-loamy, mixed (calcareous), frigid Fluvaquentic Endoaquolls
Hutchley-----	Loamy-skeletal, mixed, frigid Lithic Argixerolls
Hyzen-----	Loamy-skeletal, carbonatic, frigid Lithic Haploxerolls
Idway-----	Coarse-loamy over sandy or sandy-skeletal, mixed, mesic Durixerollic Camborhids
Izamatck-----	Sandy-skeletal, mixed, mesic Typic Torriorthents
Izar-----	Loamy-skeletal, mixed (calcareous), mesic Lithic Xeric Torriorthents
Jackpot-----	Ashy, mesic, shallow Vitrixerandic Camborhids
James Canyon-----	Fine-loamy, mixed, mesic Cumulic Endoaquolls
Jericho-----	Loamy-skeletal, mixed, mesic, shallow Xerollic Durorhids
Jungo-----	Loamy-skeletal, mixed, mesic Xerollic Haplargids
Katelana-----	Fine-silty, carbonatic, mesic Typic Torriorthents
Kawich-----	Mixed, mesic Typic Torripsamments
Kelk-----	Fine-silty, mixed, mesic Durixerollic Camborhids
Kolda-----	Fine, montmorillonitic (calcareous), mesic Typic Endoaquolls
Krenka-----	Loamy-skeletal, mixed, frigid Pachic Argixerolls

TABLE 15.--CLASSIFICATION OF THE SOILS--Continued

Soil name	Family or higher taxonomic class
Kunzler-----	Coarse-loamy, mixed, mesic Durixerollic Calciorrhids
Kyler-----	Loamy-skeletal, carbonatic, mesic Lithic Xeric Torriorthents
Kzin-----	Loamy-skeletal, mixed (calcareous), mesic, shallow Xeric Torriorthents
Linoyer-----	Coarse-silty, mixed (calcareous), mesic Xeric Torriorthents
Logan-----	Fine-silty, mesic Typic Calcicquolls
Lomoline-----	Loamy-skeletal, mixed (calcareous), mesic Lithic Xeric Torriorthents
Loray-----	Sandy-skeletal, mixed, mesic Typic Calciorrhids
Luning-----	Sandy, mixed, mesic Typic Torriorthents
Lykal-----	Coarse-silty, carbonatic, mesic Aeric Fluvaquents
Mazuma-----	Coarse-loamy, mixed (calcareous), mesic Typic Torriorthents
McIvey-----	Clayey-skeletal, montmorillonitic, frigid Typic Argixerolls
Mizpah-----	Fine, montmorillonitic, mesic Typic Paleargids
Muiral-----	Loamy-skeletal, mixed Typic Cryochrepts
Mysol-----	Fine-loamy over sandy or sandy-skeletal, mixed (calcareous), mesic Durorhithidic Torriorthents
Nevador-----	Fine-loamy, mixed, mesic Durixerollic Haplargids
Okan-----	Coarse-loamy, mixed (calcareous), mesic Durorhithidic Xeric Torriorthents
Onkeyo-----	Loamy-skeletal, mixed, frigid Lithic Calcixerolls
Orupa-----	Fine, montmorillonitic (calcareous), mesic Xeric Torriorthents
Oupico-----	Coarse-loamy, mixed, mesic Xerollic Durorhithids
Palinor-----	Loamy-skeletal, carbonatic, mesic, shallow Xerollic Durorhithids
Parisa-----	Loamy-skeletal, carbonatic, mesic Xerollic Durorhithids
Peeko-----	Loamy, mixed, mesic, shallow Xerollic Durorhithids
Pharo-----	Loamy-skeletal, carbonatic, mesic Aridic Calcixerolls
Piltown-----	Coarse-loamy, mixed (calcareous), mesic Typic Torriorthents
Piocha-----	Clayey-skeletal, montmorillonitic, mesic Lithic Argixerolls
Pookaloo-----	Loamy-skeletal, carbonatic, mesic Lithic Xerollic Calciorrhids
Pyrrat-----	Loamy-skeletal, mixed, mesic Durixerollic Calciorrhids
Ragtown-----	Fine, montmorillonitic (calcareous), mesic Typic Torriorthents
Rozara-----	Loamy-skeletal, mixed, frigid Lithic Argixerolls
Rubicity-----	Coarse-loamy, mixed, frigid Cumulic Haploxerolls
Rubylake-----	Fine-silty, carbonatic, mesic Mollic Fluvaquents
Saltair-----	Fine-silty, mixed, mesic Typic Salorhithids
Schoer-----	Fine, montmorillonitic, mesic Aridic Argixerolls
Secrepass-----	Clayey-skeletal, montmorillonitic, frigid Typic Palexerolls
Segura-----	Loamy, mixed, frigid Lithic Argixerolls
Shabliss-----	Loamy, mixed, mesic, shallow Haploxerollic Durorhithids
Shantown-----	Coarse-loamy, mixed, mesic Aridic Haploxerolls
Sheffit-----	Fine, montmorillonitic (calcareous), mesic Xeric Torriorthents
Shuttle-----	Coarse-loamy, mixed (calcareous), mesic Durorhithidic Torriorthents
Simon-----	Fine-loamy, mixed, frigid Aridic Argixerolls
Slipback-----	Fine-loamy, mixed, mesic Xerollic Natrargids
Smaug-----	Coarse-silty, mixed (calcareous), mesic Typic Torriorthents
Sodhouse-----	Loamy, mixed, mesic, shallow Typic Durorhithids
Sonoma-----	Fine-silty, mixed (calcareous), mesic Aeric Fluvaquents
Stampede-----	Fine, montmorillonitic, frigid Aridic Durixerolls
Stewval-----	Loamy-skeletal, mixed, mesic Lithic Xerollic Haplargids
Sumine-----	Loamy-skeletal, mixed, frigid Aridic Argixerolls
Sycomat-----	Coarse-loamy, mixed, mesic Duric Calciorrhids
Tarnach-----	Loamy-skeletal, mixed, mesic Lithic Xerollic Calciorrhids
Tecomar-----	Loamy-skeletal, carbonatic, mesic Lithic Xerollic Calciorrhids
Theriot-----	Loamy-skeletal, carbonatic, mesic Lithic Torriorthents
Threesee-----	Sandy-skeletal, mixed, mesic Xerollic Calciorrhids
Timpie-----	Fine-silty, mixed (calcareous), mesic Typic Torriorthents
Toano-----	Coarse-silty, mixed (calcareous), mesic Typic Torriorthents
Toba-----	Fine-loamy over sandy or sandy-skeletal, mixed, mesic Aquic Calciorrhids
Toole-----	Coarse-loamy, mixed (calcareous), mesic Typic Torriorthents
Tosser-----	Sandy-skeletal, mixed, mesic Xerollic Calciorrhids
Tulase-----	Coarse-silty, mixed (calcareous), mesic Durorhithidic Xeric Torriorthents
Tusel-----	Loamy-skeletal, mixed Argic Pachic Cryoborolls
Umbertland-----	Fine, montmorillonitic (calcareous), mesic Aeric Halaquepts
Upatad-----	Loamy-skeletal, mixed, mesic Lithic Argixerolls
Urmafot-----	Loamy, mixed, mesic, shallow Orthidic Durixerolls
Uvada-----	Fine, montmorillonitic, mesic Typic Natrargids
Valmy-----	Coarse-loamy, mixed (calcareous), mesic Durorhithidic Torriorthents
Wardbay-----	Loamy-skeletal, carbonatic, frigid Pachic Calcixerolls
Welch-----	Fine-loamy, mixed, frigid Cumulic Endoaquolls

TABLE 15.--CLASSIFICATION OF THE SOILS--Continued

Soil name	Family or higher taxonomic class
Welsum-----	Fine-loamy over sandy or sandy-skeletal, mixed (calcareous), frigid Cumulic Endoaquolls
Wendane-----	Fine-silty, mixed (calcareous), mesic Aeric Halaquepts
Wesfil-----	Loamy-skeletal, mixed (calcareous), mesic Lithic Xeric Torriorthents
Wintermute-----	Loamy-skeletal, mixed, mesic Duric Calciorthids
Xeric Torriorthents-----	Mesic Xeric Torriorthents
Zafod-----	Loamy-skeletal, mixed, mesic Haploxerollic Durorthids
Zerk-----	Sandy-skeletal, mixed, mesic Duric Calciorthids
Zimbo-----	Loamy-skeletal, carbonatic, mesic Lithic Xeric Torriorthents
Zorravista-----	Mixed, mesic Xeric Torripsamments

RANGELAND PLANTS AND WOODLAND UNDERSTORY

053--PALINOR-URMAPOT ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		PALINOR	URMAPOT	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	20-35	10-20	40-50	20-35	20-35	---
Sandberg bluegrass	POSE	2-8	---	---	2-8	2-8	---
bluebunch wheatgrass	AGSP	---	20-40	---	---	---	---
bottlebrush squirreltail	SIHY	2-5	---	2-5	2-5	2-5	---
muttongrass	POPE	---	2-8	---	---	---	---
needleandthread	STCO4	5-15	2-5	---	5-15	5-15	---
globemallow	SPHAE	---	---	1-5	---	---	---
black sagebrush	ARARN	25-35	20-30	---	25-35	25-35	---
downy rabbitbrush	CHVIP4	2-5	---	---	2-5	2-5	---
shadscale	ATCO	2-5	---	25-35	2-5	2-5	---
winterfat	EULA5	---	2-5	5-10	---	---	---
Range site number		028BY011NV	028BY006NV	028BY075NV	028BY011NV	028BY011NV	None
Potential production (lb/acre):							
Favorable years		600	800	700	600	600	
Normal years		450	600	500	450	450	
Unfavorable years		250	400	300	250	250	

062--AMTOFT-ROCK OUTCROP ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		AMTOFT	ROCK OUTCROP	AMTOFT	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	5-15	---	15-25	10-25	20-30	15-25	2-10
Sandberg bluegrass	POSE	---	---	2-5	2-5	---	---	2-8
blue grama	BOGR2	1-5	---	---	---	---	---	---
bluebunch wheatgrass	AGSP	30-40	---	2-8	---	---	---	---
bluegrass	FOA++	2-5	---	---	---	---	---	---
bottlebrush squirreltail	SIHY	---	---	2-5	---	---	---	---
galleta	HIJA	---	---	2-8	2-8	2-5	2-8	1-5
needleandthread	STCO4	2-5	---	---	2-10	15-25	5-15	1-5
sand dropseed	SPCR	---	---	---	---	2-5	---	---
globemallow	SPHAE	---	---	---	---	2-5	---	---
Nevada ephedra	EPNE	---	---	---	---	---	5-15	5-10
Stansbury cliffrose	COMES	2-8	---	---	---	---	---	---
Utah juniper	JUOS	---	---	5-15	---	---	---	---
big sagebrush	ARTR2	---	---	---	---	---	---	30-45
black sagebrush	ARARN	25-35	---	40-50	15-30	15-30	15-35	---
fourwing saltbush	ATCA2	---	---	---	---	2-8	---	---
horsebrush	TETRA3	---	---	---	---	---	5-15	2-8
other shrubs	SSSS	---	---	---	---	---	---	5-25
rubber rabbitbrush	CHNA2	---	---	---	---	---	---	5-20
shadscale	ATCO	---	---	---	2-5	---	2-8	---
spiny hopsage	GRSP	---	---	---	---	---	---	2-8
winterfat	EULA5	---	---	---	5-10	2-5	2-8	---
Range site number		028AY034NV	None	028AY027NV	028AY004NV	028AY013NV	028AY044NV	028AY038NV
Potential production (lb/acre):								
Favorable years		600		400	500	700	600	1300
Normal years		400		350	325	500	400	730
Unfavorable years		200		125	100	300	200	530

066--ZIMBOB ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		ZIMBOB	ZIMBOB	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	10-20	15-25	20-35	20-30	---	5-10
Sandberg bluegrass	POSE	2-5	2-5	2-8	2-5	---	2-5
Scribner needlegrass	STSC2	---	2-5	---	---	---	2-5
bluebunch wheatgrass	AGSP	---	2-5	---	---	---	15-25
bottlebrush squirreltail	SIHY	2-5	2-5	2-5	2-8	---	---
needleandthread	STCO4	10-20	---	5-15	10-20	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	2-5
Mexican cliffrose	COMB5	---	---	---	---	---	1-10
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	---
black sagebrush	ARARN	35-45	30-35	25-35	---	---	30-40
downy rabbitbrush	CHVIP4	---	---	2-5	---	---	---
rabbitbrush	CHRY89	---	---	---	2-5	---	---
shadscale	ATCO	2-5	---	2-5	---	---	---
singleleaf pinyon	FIMO	---	---	---	---	---	10-15
Range site number		028BY016NV	028BY059NV	028BY011NV	028BY010NV	None	028BY090NV
Potential production (lb/acre):							
Favorable years		350	400	600	800		400
Normal years		225	350	450	600		250
Unfavorable years		100	125	250	400		125

067--TECOMar-TECOMar, DRY-POOKALOO ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		TECOMar	TECOMar	POOKALOO	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	10-20	5-10	X	10-20	15-30	---
Sandberg bluegrass	POSE	---	2-5	---	2-5	---	---
Scribner needlegrass	STSC2	---	2-5	---	---	---	---
Thurber needlegrass	STTH2	---	---	X	---	---	---
basin wildrye	ELCI2	---	---	X	---	---	---
bluebunch wheatgrass	AGSP	20-40	15-25	X	---	30-40	---
bluegrass	POA++	2-5	---	X	---	5-10	---
bottlebrush squirreltail	SIHY	---	---	X	2-5	---	---
needleandthread	STCO4	2-5	---	---	10-20	---	---
arrowleaf balsamroot	BASA3	---	---	X	---	---	---
goldenweed	HAPLO2	2-5	---	---	---	---	---
tapertip hawksbeard	CRAC2	2-5	---	X	---	---	---
Douglas rabbitbrush	CHVI8	---	2-5	---	---	---	---
Mexican cliffrose	COMES	---	1-10	---	---	---	---
Stansbury cliffrose	COMES	---	---	X	---	---	---
antelope bitterbrush	PATR2	---	---	X	---	5-10	---
black sagebrush	ARARN	25-35	30-40	X	35-45	---	---
curlleaf mountainmahogany	CELE3	---	---	X	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	15-25	---
serviceberry	AMELA	---	---	X	---	---	---
shadscale	ATCO	2-5	---	---	2-5	---	---
winterfat	EULA5	2-5	---	---	---	---	---
Utah juniper	JUOS	---	---	X	---	---	---
singleleaf pinyon	PIMO	---	10-15	X	---	---	---
Range site number		028BY008NV	028BY090NV	028BY060NV	028BY016NV	028BY079NV	None
Potential production (lb/acre):							
Favorable years		600	400	500	350	700	
Normal years		400	250	300	225	500	
Unfavorable years		200	125	250	100	300	

069--ZIMBOB-HYZEN-ROCK OUTCROP ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		ZIMBOB	HYZEN	ROCK OUTCROP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	10-20	2-5	---	15-25	15-25	20-30	10-20
Sandberg bluegrass	POSE	2-5	---	---	2-5	2-5	2-5	---
Scribner needlegrass	STSC2	---	2-10	---	---	2-5	---	---
bluebunch wheatgrass	AGSP	---	---	---	---	2-5	---	20-40
bottlebrush squirreltail	SIHY	2-5	---	---	2-5	2-5	2-8	---
nuttongrass	POFE	---	---	---	---	---	---	2-8
needleandthread	STCO4	10-20	---	---	10-20	---	10-20	2-5
goldenweed	HAPLO2	---	2-5	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	25-35	---
black sagebrush	ARARN	35-45	2-8	---	---	30-35	---	20-30
bud sagebrush	ARSP5	---	---	---	10-15	---	---	---
desert snowberry	SYLO	---	2-8	---	---	---	---	---
littleleaf mountainmahogany	CEIN7	---	60-70	---	---	---	---	---
rabbitbrush	CHRY99	---	---	---	---	---	2-5	---
shadscale	ATCO	2-5	---	---	40-50	---	---	---
winterfat	EULA5	---	---	---	---	---	---	2-5
Range site number		028BY016NV	028BY066NV	None	028BY019NV	028BY059NV	028BY010NV	028BY006NV
Potential production (lb/acre):								
Favorable years		350	1300		300	400	800	800
Normal years		225	1000		225	350	600	600
Unfavorable years		100	800		100	125	400	400

070--STEWVAL-EASTWELL ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		STEWVAL	EASTWELL	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORRY	10-25	20-35	15-25	40-50	40-50
Sandberg bluegrass	POSE	2-5	2-8	---	---	---
bluegrass	POA++	---	---	2-5	---	---
bottlebrush squirreltail	SIHY	---	2-5	---	2-5	2-5
galleta	HIJA	2-8	---	---	---	---
needleandthread	STCO4	2-10	5-15	5-10	---	---
globemallow	SPHAE	---	---	2-5	1-5	1-5
black sagebrush	ARARN	15-30	25-35	15-25	---	---
downy rabbitbrush	CHVIP4	---	2-5	---	---	---
shadscale	ATCO	2-5	2-5	---	25-35	25-35
spiny hopsage	GRSP	---	---	20-30	---	---
winterfat	EULA5	5-10	---	---	5-10	5-10
Range site number		028AY004NV	028BY011NV	028BY053NV	028BY075NV	028BY075NV
Potential production (lb/acre):						
Favorable years		500	600	600	700	700
Normal years		325	450	400	500	500
Unfavorable years		100	250	200	300	300

071--STEWVAL-WESFIL-ROCK OUTCROP ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		STEWVAL	WESFIL	ROCK OUTCROP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	X	---	---
Indian ricegrass	ORRY	2-5	20-30	---	2-5	X	15-25	20-30
Sandberg bluegrass	POSE	---	---	---	---	X	---	---
Thurber needlegrass	STH2	10-20	15-25	---	10-20	X	---	---
basin wildrye	ELCI2	---	---	---	---	X	---	---
bluebunch wheatgrass	AGSP	20-30	---	---	20-30	X	---	---
bluegrass	POA++	2-8	---	---	2-5	---	---	---
bottlebrush squirreltail	SIHY	---	---	---	---	X	2-5	---
galleta	HIJA	---	---	---	---	---	2-5	2-5
needleandthread	STCO4	---	2-8	---	2-5	---	5-10	15-25
sand dropseed	SPCR	---	---	---	---	---	---	2-5
wheatgrass	AGROP2	---	---	---	---	---	---	2-8
arrowleaf balsamroot	BASA3	---	---	---	---	X	---	---
crag aster	ASSC3	---	---	---	2-5	---	---	---
scarlet globemallow	SPCO	---	---	---	---	---	2-5	---
tapertip hawksbeard	CRAC1	---	---	---	2-5	X	---	---
Wyoming big sagebrush	ARTRW	---	---	---	20-30	---	25-35	10-20
antelope bitterbrush	PUTR2	---	---	---	---	X	---	---
black sagebrush	ARARN	25-35	20-35	---	---	---	---	---
bud sagebrush	ARSP5	---	---	---	---	---	2-5	---
ephedra	EPHED	---	---	---	---	X	---	---
fourwing saltbush	ATCA2	---	---	---	---	---	---	5-15
mountain big sagebrush	ARVA2	---	---	---	---	X	---	---
serviceberry	AMELA	---	---	---	---	X	---	---
shadscale	ATCO	---	---	---	---	---	2-5	---
spiny hopsage	GRSP	---	---	---	2-5	---	5-15	---
winterfat	EULAS	---	---	---	---	---	---	5-10
Utah juniper	JUOS	---	---	---	---	X	---	---
singleleaf pinyon	PIMO	---	---	---	---	X	---	---
Range site number		028AY036NV	028AY035NV	None	028AY022NV	028BY062NV	028AY028NV	028AY005NV
Potential production (lb/acre):								
Favorable years		800	450		800	700	900	1000
Normal years		600	300		600	500	700	700
Unfavorable years		400	150		350	300	400	400

080--STEWVAL VERY GRAVELLY FINE SANDY LOAM, 8 TO 30 PERCENT SLOPES

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		STEWVAL	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	10-25	40-50	10-25	40-50
Sandberg bluegrass	POSE	2-5	---	2-5	---
bottlebrush squirreltail	SIHY	---	2-5	---	2-5
galleta	HIJA	2-8	---	2-8	---
needleandthread	STCO4	2-10	---	2-10	---
globemallow	SPHAE	---	1-5	---	1-5
black sagebrush	ARARN	15-30	---	15-30	---
shadscale	ATCO	2-5	25-35	2-5	25-35
winterfat	EULA5	5-10	5-10	5-10	5-10
Range site number		028AY004NV	028BY075NV	028AY004NV	028BY075NV
Potential production (lb/acre):					
Favorable years		500	700	500	700
Normal years		325	500	325	500
Unfavorable years		100	300	100	300

092--WESFIL-WINTERMUTE-OKAN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or inclusion number--						
		WESFIL	WINTERMUTE	OKAN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	10-20	40-50	15-25	20-35	2-10	5-10	15-25
Sandberg bluegrass	POSE	2-5	---	---	2-8	2-5	---	---
basin wildrye	ELCI2	---	---	---	---	---	2-5	---
bottlebrush squirreltail	SIHY	2-5	2-5	2-5	2-5	2-5	---	5-10
needleandthread	STCO4	10-20	---	5-10	5-15	2-10	---	---
other perennial grasses	PPGG	---	---	---	---	---	---	2-5
thickspike wheatgrass	AGDA	---	---	---	---	---	2-5	---
globemallow	SPHAE	---	1-5	---	---	---	---	2-5
scarlet globemallow	SPCO	---	---	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	20-35	---	---	---	---
black greasewood	SAVE4	---	---	---	---	---	40-60	---
black sagebrush	ARARN	35-45	---	---	25-35	---	---	---
bud sagebrush	AR8P5	---	---	---	---	---	---	2-8
downy rabbitbrush	CHVIP4	---	---	---	2-5	---	---	---
fourwing saltbush	ATCA2	---	---	---	---	---	5-10	2-5
pigmy sagebrush	ARPY2	---	---	---	---	50-70	---	---
shadscale	ATCO	2-5	25-35	2-5	2-5	---	5-10	---
spiny hopsage	GRSP	---	---	5-20	---	---	---	---
winterfat	EULAS	---	5-10	---	---	---	---	40-50
Range site number		028BY016NV	028BY075NV	028BY052NV	028BY011NV	028BY040NV	028BY021NV	028BY013NV
Potential production (lb/acre):								
Favorable years		350	700	800	600	250	400	700
Normal years		225	500	600	450	175	300	500
Unfavorable years		100	300	450	250	100	200	350

098--WESFIL-TARNACH ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		WESFIL	TARNACH	WESFIL	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	10-25	5-15	10-25	15-25	---	15-25	2-10
Sandberg bluegrass	POSE	2-5	---	2-5	---	---	2-5	2-5
blue grama	BOGR2	---	1-5	---	---	---	---	---
bluebunch wheatgrass	AGSP	---	30-40	---	---	---	2-8	---
bluegrass	POA++	---	2-5	---	---	---	---	---
bottlebrush squirreltail	SIHY	---	---	---	2-5	---	2-5	2-5
galleta	HIJA	2-8	---	2-8	2-5	---	2-8	2-5
needleandthread	STCO4	2-10	2-5	2-10	5-10	---	---	2-10
scarlet globemallow	SFCO	---	---	---	2-5	---	---	---
Stansbury cliffrose	COMES	---	2-8	---	---	---	---	---
Utah juniper	JUOS	---	---	---	---	---	5-15	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	---	---
black sagebrush	AKARN	15-30	25-35	15-30	---	---	40-50	---
bud sagebrush	ARSP5	---	---	---	2-5	---	---	---
pygmy sagebrush	ARFY2	---	---	---	---	---	---	50-70
shadscale	ATCO	2-5	---	2-5	2-5	---	---	---
spiny hopsage	GRSP	---	---	---	5-15	---	---	---
winterfat	EULA5	5-10	---	5-10	---	---	---	---
Range site number		028AY004NV	028AY034NV	028AY004NV	028AY028NV	None	028AY027NV	028AY007NV
Potential production (lb/acre):								
Favorable years		500	600	500	900		400	250
Normal years		325	400	325	700		350	175
Unfavorable years		100	200	100	400		125	100

099--WESFIL-ARMESPAN-HEIST ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		WESFIL	ARMESPAN	HEIST	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	10-25	10-25	40-50	X	15-25	5-15	40-50
Sandberg bluegrass	POSE	2-5	2-5	---	X	2-5	---	---
blue grama	BOGR2	---	---	---	---	---	1-5	---
bluebunch wheatgrass	AGSP	---	---	---	---	---	30-40	---
bluegrass	POA++	---	---	---	---	---	2-5	---
bottlebrush squirreltail	SIHY	---	---	2-5	X	---	---	---
galleta	HIJA	2-8	2-8	---	X	1-5	---	2-8
needleandthread	STCO4	2-10	2-10	---	X	5-10	2-5	---
King birdbeak	COKI	---	---	---	X	---	---	---
erigonum	ERIOG	---	---	---	X	---	---	---
globemallow	SPHAE	---	---	---	---	2-5	---	2-5
phlox	PHLOX	---	---	---	X	---	---	---
Douglas rabbitbrush	CHV19	---	---	---	X	---	---	---
Stansbury cliffrose	COMES	---	---	---	---	---	2-8	---
Utah juniper	JUOS	---	---	---	X	---	---	---
black sagebrush	ARARN	15-30	15-30	---	X	15-25	25-35	---
bud sagebrush	ARSP5	---	---	5-15	---	---	---	2-8
green sphaedra	EFVI	---	---	---	X	---	---	---
pricklypear	OPUNT	---	---	---	X	---	---	---
shadscale	ATCO	2-5	2-5	---	---	---	---	1-5
spiny hopsage	GRSP	---	---	---	---	20-30	---	---
winterfat	EULAS	5-10	5-10	20-30	---	---	---	25-30
Range site number		028AY004NV	028AY004NV	028BY084NV	028AY041NV	028AY047NV	028AY034NV	028AY002NV
Potential production (lb/acre):								
Favorable years		500	500	900	400	600	600	800
Normal years		325	325	700	250	400	400	600
Unfavorable years		100	100	400	150	200	200	400

100--BENIN-MAZUMA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		BENIN	MAZUMA	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	2-5	2-8	30-35	2-8	30-35
alkali sacaton	SPAI	5-10	---	---	5-10	---	5-10
basin wildrye	ELCI2	2-5	---	---	---	---	---
bottlebrush squirreltail	SIRY	---	2-5	2-5	2-5	2-5	2-5
inland saltgrass	DISPS2	2-8	---	---	---	---	---
thickspike wheatgrass	AGDA	---	---	---	2-5	---	2-5
western wheatgrass	AGSM	---	---	5-15	---	5-15	---
black greasewood	SAVE4	60-75	20-30	---	10-20	---	10-20
bud sagebrush	ARSP5	---	2-10	---	---	---	---
fourwing saltbush	ATCA2	---	---	---	30-40	---	30-40
rubber rabbitbrush	CHNA2	2-5	---	2-5	---	---	---
shadscale	ATCO	2-5	20-50	2-5	---	2-5	---
sickle saltbush	ATPA	---	---	55-65	---	55-65	---
spiny hopsage	GRSP	---	---	---	2-8	---	2-8
winterfat	EULA5	---	---	5-15	---	5-15	---
Range site number		028BY020NV	028BY074NV	028BY047NV	028AY011NV	028BY047NV	028AY011NV
Potential production (lb/acre):							
Favorable years		500	600	500	700	500	700
Normal years		300	400	350	500	350	500
Unfavorable years		150	200	200	350	200	350

101--TOANO-LINOYER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		TOANO	LINOYER	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	2-8	15-25	40-50	1-5
bottlebrush squirreltail	SIHY	2-5	5-10	2-5	5-10
other perennial grasses	PPGG	---	2-5	---	---
western wheatgrass	AGSM	5-15	---	---	---
globemallow	SPHAE	---	2-5	---	---
bud sagebrush	ARSP5	---	2-8	5-15	---
fourwing saltbush	ATCA2	---	2-5	---	---
shadscale	ATCO	2-5	---	---	85-90
sickle saltbush	ATFA	55-65	---	---	---
winterfat	BULAS	5-15	40-50	20-30	---
Range site number		028BY047NV	028BY013NV	028BY084NV	028BY073NV
Potential production (lb/acre):					
Favorable years		500	700	900	400
Normal years		350	500	700	300
Unfavorable years		200	350	400	200

103--BENIN-PLAYAS ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		BENIN	PLAYAS	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	---	2-5	2-10	---
alkali sacaton	SPAI	5-10	---	---	---	15-40
basin wildrye	ELCI2	2-5	---	---	10-20	40-60
bottlebrush squirreltail	SIHY	---	---	2-5	---	---
inland saltgrass	DISPS2	2-8	---	---	---	2-5
western wheatgrass	AGSM	---	---	---	---	2-5
big sagebrush	ARTR2	---	---	---	20-30	---
black greasewood	SAVE4	60-75	---	20-30	30-40	5-15
bud sagebrush	ARSP5	---	---	2-10	---	---
rubber rabbitbrush	CHNA2	2-5	---	---	2-5	2-5
shadscale	ATCO	2-5	---	20-50	---	---
Range site number		028BY020NV	None	028BY074NV	028BY028NV	028BY004NV
Potential production (lb/acre):						
Favorable years		500		600	800	2200
Normal years		300		400	600	1500
Unfavorable years		150		200	400	800

111--GRAVIER-ARMESPAV ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		GRAVIER	ARMESPAV	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	15-45	20-30	10-25	15-25	10-25	1-5
King desertgrass	BLKY	---	---	---	2-5	---	---
Sandberg bluegrass	POSE	---	---	2-5	---	2-5	---
bottlebrush squirreltail	SIHY	---	---	---	---	---	5-10
galleta	HIJA	2-8	2-5	2-8	2-8	2-8	---
needleandthread	STCO4	2-8	15-25	2-10	---	2-10	---
sand dropseed	SPCR	2-5	2-5	---	---	---	---
globemallow	SPHAE	2-5	2-5	---	2-5	---	---
black sagebrush	ARARN	---	15-30	15-30	---	15-30	---
bud sagebrush	ARSP5	2-10	---	---	5-10	---	---
fourwing saltbush	ATCA2	---	2-8	---	---	---	---
gray molly kochia	KOAMV	---	---	---	2-5	---	---
shadscale	ATCO	20-30	---	2-5	40-50	2-5	85-90
winterfat	EULA5	5-15	2-5	5-10	2-8	5-10	---
Range site number		028AY018NV	028AY013NV	028AY004NV	028AY012NV	028AY004NV	028BY073NV
Potential production (lb/acre):							
Favorable years		700	700	500	500	500	400
Normal years		500	500	325	300	325	300
Unfavorable years		300	300	100	200	100	200

113--GRAVIER-JERICO ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		GRAVIER	GRAVIER	JERICO	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	35-45	40-50	20-30	15-25	15-25	20-30
King desertgrass	BLKI	---	---	---	2-5	---	---
bottlebrush squirreltail	SIHY	---	---	---	---	5-10	---
galleta	HIJA	2-8	2-8	2-5	2-8	---	2-5
needleandthread	STCO4	2-8	---	15-25	---	---	15-25
other perennial grasses	PPGG	---	---	---	---	2-5	---
sand dropseed	SPCR	2-5	---	2-5	---	---	2-5
globemallow	SPHAE	2-5	2-5	2-5	2-5	2-5	2-5
black sagebrush	ARARN	---	---	15-30	---	---	15-30
bud sagebrush	ARSP5	2-10	2-8	---	5-10	2-8	---
fourwing saltbush	ATCA2	---	---	2-8	---	2-5	2-8
gray molly kochia	KOAMV	---	---	---	2-5	---	---
shadscale	ATCO	20-30	1-5	---	40-50	---	---
winterfat	EULA5	5-15	25-30	2-5	2-8	40-50	2-5
Range site number		028AY018NV	028AY002NV	028AY013NV	028AY012NV	028BY013NV	028AY013NV
Potential production (lb/acre):							
Favorable years		700	800	700	500	700	700
Normal years		500	600	500	300	500	500
Unfavorable years		300	400	300	200	350	300

116--GRAVIER-IZAMATCH-LORAY ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		GRAVIER	IZAMATCH	LORAY	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	2-8	---	---	---	---	---	---
Indian ricegrass	ORRY	---	35-45	15-25	20-30	10-20	10-20	2-5
King desertgrass	BLKI	---	---	2-5	---	---	---	---
Letterman needlegrass	STLE4	2-5	---	---	---	---	---	---
bottlebrush squirreltail	SIBY	---	---	---	---	2-5	2-5	2-5
galleta	HIJA	---	2-8	2-8	2-5	1-5	---	---
mountain brome	BRCA5	5-10	---	---	---	---	---	---
needleandthread	STCO4	---	2-8	---	15-25	---	---	---
sand dropseed	SPCR	---	2-5	---	2-5	---	---	---
slender wheatgrass	AGTR	5-10	---	---	---	---	---	---
western wheatgrass	AGSM	---	---	---	---	---	5-15	---
globemallow	SPHE	---	2-5	2-5	2-5	2-5	---	---
black greasewood	SAVE4	---	---	---	---	---	---	20-30
black sagebrush	ARAR	---	---	---	15-30	---	---	---
bud sagebrush	ARSP5	---	2-10	5-10	---	---	---	2-10
fourwing saltbush	ATCA2	---	---	---	2-8	10-20	---	---
gray molly kochia	ROAMV	---	---	2-5	---	---	2-5	---
quaking aspen	POTRT	50-60	---	---	---	---	---	---
shadscale	ATCO	---	20-30	40-50	---	2-5	---	20-50
sickle saltbush	ATFA	---	---	---	---	---	45-55	---
spiny hopsage	GRSP	---	---	---	---	30-40	---	---
willow	SALIX	1-8	---	---	---	---	---	---
winterfat	EULA5	---	5-15	2-8	2-5	2-5	2-8	---
Range site number		025XY002NV	028AY018NV	028AY012NV	028AY013NV	028AY006NV	028AY033NV	028BY074NV
Potential production (lb/acre):								
Favorable years		1800	700	500	700	600	700	600
Normal years		1300	500	300	500	400	500	400
Unfavorable years		900	300	200	300	250	350	200

118--GRAVIER-AUTOMAL-ZERK ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		GRAVIER	AUTOMAL	ZERK	Inclusion 1	Inclusion 2
Indian ricegrass	OREY	40-50	20-35	40-50	15-25	---
Sandberg bluegrass	POSE	---	2-8	---	---	---
bottlebrush squirreltail	SIHY	2-5	2-5	2-5	2-5	5-10
needleandthread	STCO4	---	5-15	---	5-10	---
western wheatgrass	AGSM	---	---	---	---	2-5
scarlet globemallow	SPCO	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	---	20-35	---
black greasewood	SAVE4	---	---	---	---	15-25
black sagebrush	ARARN	---	25-35	---	---	---
bud sagebrush	ARSP5	5-15	---	5-15	---	---
downy rabbitbrush	CHVIP4	---	2-5	---	---	---
shadscale	ATCO	---	2-5	---	2-5	2-5
sickle saltbush	ATFA	---	---	---	---	50-60
spiny hopsage	GRSP	---	---	---	5-20	---
winterfat	EULAS	20-30	---	20-30	---	---
Range site number		028BY084NV	028BY011NV	028BY084NV	028BY052NV	028BY097NV
Potential production (lb/acre):						
Favorable years		900	600	900	800	500
Normal years		700	450	700	600	350
Unfavorable years		400	250	400	450	200

119--WINTERMUTE-LINOYER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		WINTERMUTE	LINOYER	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	40-50	15-25	10-20	40-50	20-30
Sandberg bluegrass	POSE	---	---	---	---	2-5
bottlebrush squirreltail	SIHY	2-5	5-10	5-15	2-5	2-8
needleandthread	STCO4	---	---	---	---	10-20
other perennial grasses	PPGG	---	2-5	---	---	---
globemallow	SPHAE	1-5	2-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35
bud sagebrush	ARSP5	---	2-8	10-25	5-15	---
fourwing saltbush	ATCA2	---	2-5	---	---	---
rabbitbrush	CHRY89	---	---	---	---	2-5
shadscale	ATCO	25-35	---	40-50	---	---
winterfat	EULA5	5-10	40-50	---	20-30	---
Range site number		028BY075NV	028BY013NV	028BY017NV	028BY084NV	028BY010NV
Potential production (lb/acre):						
Favorable years		700	700	400	900	800
Normal years		500	500	300	700	600
Unfavorable years		300	350	200	400	400

120--IZAMATCH-ARMESPAN-CLIFFDOWN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		IZAMATCH	ARMESPAN	CLIFFDOWN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	35-45	10-25	35-45	15-25	5-10	10-25	25-35
King desertgrass	BLKI	---	---	---	2-5	---	---	---
Sandberg bluegrass	POSE	---	2-5	---	---	---	2-5	---
bottlebrush squirreltail	SINY	---	---	---	---	2-5	---	2-5
galleta	HIJA	2-8	2-8	2-8	2-8	1-4	2-8	2-5
needleandthread	STCO4	2-8	2-10	2-8	---	---	2-10	---
sand dropseed	SPCR	2-5	---	2-5	---	---	---	2-5
globemallow	SPHAE	2-5	---	2-5	2-5	2-5	---	2-5
princesplume	STANL	---	---	---	---	---	---	2-5
Nevada ephedra	EPNE	---	---	---	---	2-15	---	2-5
black sagebrush	ARARN	---	15-30	---	---	---	15-30	---
bud sagebrush	ARSP5	2-10	---	2-10	5-10	---	---	2-5
fourwing saltbush	ATCA2	---	---	---	---	5-30	---	---
gray molly kochia	KOAMV	---	---	---	2-5	---	---	---
horsebrush	TETRA3	---	---	---	---	---	---	5-10
rabbitbrush	CHRY89	---	---	---	---	5-20	---	---
shadscale	ATCO	20-30	2-5	20-30	40-50	2-5	2-5	15-25
spiny hopsage	GRSP	---	---	---	---	5-20	---	---
winterfat	EULA5	5-15	5-10	5-15	2-8	---	5-10	5-10
Range site number		028AY018NV	028AY004NV	028AY018NV	028AY012NV	028AY037NV	028AY004NV	028AY014NV
Potential production (lb/acre):								
Favorable years		700	500	700	500	600	50	600
Normal years		500	325	500	300	500	325	400
Unfavorable years		300	100	300	200	400	100	200

122--GRAVIER-IZAMATCH ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		GRAVIER	IZAMATCH	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	OREY	35-45	35-45	25-35	15-25	40-50	5-10
King desertgrass	BLKI	---	---	---	2-5	---	---
bottlebrush squirreltail	SIEY	---	---	2-5	---	---	2-5
galleta	HIJA	2-8	2-8	2-5	2-8	2-8	1-4
needleandthread	STCO4	2-8	2-8	---	---	---	---
sand dropseed	SPCR	2-5	2-5	2-5	---	---	---
globemallow	SPHAE	2-5	2-5	2-5	2-5	2-5	2-5
princeplume	STANL	---	---	2-5	---	---	---
Nevada sphegria	EPNE	---	---	2-5	---	---	2-15
bud sagebrush	ARSP5	2-10	2-10	2-5	5-10	2-8	---
fourwing saltbush	ATCA2	---	---	---	---	---	5-30
gray molly kochia	KOAMV	---	---	---	2-5	---	---
horsebrush	TETRA3	---	---	5-10	---	---	---
rabbitbrush	CHRY89	---	---	---	---	---	5-20
shadscale	ATCO	20-30	20-30	15-25	40-50	1-5	2-5
spiny hopsage	GRSP	---	---	---	---	---	5-20
winterfat	EULA5	5-15	5-15	5-10	2-8	25-30	---
Range site number		028AY018NV	028AY018NV	028AY014NV	028AY012NV	028AY002NV	028AY037NV
Potential production (lb/acre):							
Favorable years		700	700	600	500	800	600
Normal years		500	500	400	300	600	500
Unfavorable years		300	300	200	200	400	400

130--TOOELE-BENIN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		TOOELE	BENIN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	2-5	---	2-8	5-10	2-5	10-20
alkali sacaton	SPAI	---	5-10	---	---	---	---
basin wildrye	ELCI2	---	2-5	---	2-5	---	---
bottlebrush squirreltail	SIHY	2-5	---	2-5	---	2-5	5-15
inland saltgrass	DISPS2	---	2-8	---	---	---	---
thickspike wheatgrass	AGDA	---	---	---	2-5	---	---
western wheatgrass	AGSM	---	---	5-15	---	---	---
black greasewood	SAVE4	20-30	60-75	---	40-60	20-30	---
bud sagebrush	ARSP5	2-10	---	---	---	2-10	10-25
fourwing saltbush	ATCA2	---	---	---	5-10	---	---
rubber rabbitbrush	CHNA2	---	2-5	---	---	---	---
shadscale	ATCO	20-50	2-5	2-5	5-10	20-50	40-50
sickle saltbush	ATFA	---	---	55-65	---	---	---
winterfat	EULA5	---	---	5-15	---	---	---
Range site number		028BY074NV	028BY020NV	028BY047NV	028BY021NV	028BY074NV	028BY017NV
Potential production (lb/acre):							
Favorable years		600	500	500	400	600	400
Normal years		400	300	350	300	400	300
Unfavorable years		200	150	200	200	200	200

140--GOLLAHER-BELSAC ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or inclusion number--				
		GOLLAHER	BELSAC	Inclusion 1	Inclusion 2	Inclusion 3
Columbia needlegrass	STNE3	---	2-5	---	---	---
Cusick bluegrass	POCU3	---	---	---	5-15	---
Idaho fescue	FEID	---	2-10	30-50	30-60	---
Indian ricegrass	ORHY	2-8	---	---	---	2-5
Nevada bluegrass	PONE3	---	2-5	---	---	---
Thurber needlegrass	STTH2	10-20	---	---	---	10-20
bluebunch wheatgrass	AGSP	30-40	2-5	15-30	2-10	20-35
bluegrass	PQA++	---	---	2-10	---	---
mountain brome	BRCA5	---	5-15	---	---	---
slender wheatgrass	AGTR	---	5-15	---	---	---
spike-fescue	LEKI2	---	2-10	---	---	---
tapertip hawksbeard	CRAC2	---	---	---	2-5	---
Utah serviceberry	AMUT	---	1-5	---	---	---
antelope bitterbrush	PUTR2	---	1-5	2-5	---	---
black sagebrush	ARARN	20-30	---	---	25-35	25-35
common chokecherry	PRVI	---	1-5	---	---	---
low sagebrush	ARAR8	---	---	15-25	---	---
mountain big sagebrush	ARVA2	---	5-15	---	---	---
snowberry	SYMPH	---	2-15	---	---	---
Range site number		025XY057NV	025XY004NV	025XY017NV	024XY042NV	024XY031NV
Potential production (lb/acre):						
Favorable years		700	2800	900	1000	700
Normal years		500	1800	700	800	500
Unfavorable years		300	1200	400	500	300

151--HOPEKA-AMENE-ROCK OUTCROP ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		HOPEKA	AMENE	ROCK OUTCROP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	---	5-15	---	2-5	40-60	30-40	---
Indian ricegrass	ORHY	X	---	---	---	---	---	2-8
Nevada bluegrass	PONE3	---	---	---	2-5	2-8	2-5	---
Thurber needlegrass	STTH2	X	---	---	2-8	---	---	10-20
basin wildrye	ELCI2	X	2-8	---	5-10	2-8	2-10	---
bluebunch wheatgrass	AGSP	X	15-25	---	50-60	5-15	15-30	30-40
bluegrass	POA++	X	---	---	---	---	---	---
bottlebrush squirreltail	SIHY	X	---	---	---	---	---	---
mountain brome	BRCA5	---	5-10	---	---	---	---	---
arrowleaf balsamroot	BASA3	X	---	---	---	---	2-5	---
tapertip hawksbeard	CRAC2	X	---	---	---	---	2-5	---
Stansbury cliffrose	COMES	X	---	---	---	---	---	---
Utah serviceberry	AMUT	---	2-8	---	---	---	---	---
antelope bitterbrush	PTR2	X	2-10	---	2-10	---	5-10	---
basin big sagebrush	ARTRT	---	---	---	---	10-20	---	---
black sagebrush	ARARN	X	---	---	---	---	---	20-30
curlleaf mountainmahogany	CELE3	X	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	10-20	---	5-15	---	10-20	---
serviceberry	AMELA	X	---	---	---	---	---	---
Utah juniper	JUOS	X	---	---	---	---	---	---
singleleaf pinyon	PIMO	X	---	---	---	---	---	---
Range site number		028BY060NV	025XY042NV	None	025XY009NV	025XY027NV	025XY012NV	025XY057NV
Potential production (lb/acre):								
Favorable years		500	700		1300	1300	1400	700
Normal years		300	500		900	900	1000	500
Unfavorable years		250	300		700	500	700	300

154--HOPEKA-TECOMar ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or inclusion number--				
		HOPEKA	TECOMar	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	---	X
Indian ricegrass	ORRY	X	10-20	---	2-8	---
Sandberg bluegrass	POSE	---	---	---	---	X
Thurber needlegrass	STTH1	X	---	---	10-20	---
basin wildrye	ELCI2	X	---	---	---	X
bluebunch wheatgrass	AGSP	X	20-40	---	30-40	X
bluegrass	PQA++	X	---	---	---	---
bottlebrush squirreltail	SIHY	X	---	---	---	X
muttongrass	POPE	---	2-8	---	---	X
needleandthread	STCO4	---	2-5	---	---	---
arrowleaf balsamroot	BASA3	X	---	---	---	X
tapertip hawkbeard	CRAC2	X	---	---	---	X
Stansbury cliffrose	COMES	X	---	---	---	---
antelope bitterbrush	PUTR2	X	---	---	---	X
black sagebrush	ARARN	X	20-30	---	20-30	---
curlleaf mountainmahogany	CELE3	X	---	---	---	X
mountain big sagebrush	ARVA2	---	---	---	---	X
serviceberry	AMELA	X	---	---	---	X
snowberry	SYMPH	---	---	---	---	X
winterfat	EULA5	---	2-5	---	---	---
Utah juniper	JUOS	X	---	---	---	X
singleleaf pinyon	PINO	X	---	---	---	X
Range site number		028BY060NV	028BY006NV	None	025XY057NV	028BY058NV
Potential production (lb/acre):						
Favorable years		500	800		700	500
Normal years		300	600		500	300
Unfavorable years		250	400		300	200

160--SALTAIR-KAWICH ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		SALTAIR	KAWICH	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	5-10	10-20	2-5	---	---
alkali sacaton	SPAI	---	---	---	---	---	5-10
basin wildrye	ELCI2	---	2-5	---	---	---	2-5
bottlebrush squirreltail	SIHY	---	---	2-5	5-10	---	---
inland saltgrass	DISPS2	20-30	---	---	---	---	2-8
thickspike wheatgrass	AGDA	---	2-5	---	---	---	---
western wheatgrass	AGSM	---	---	5-15	---	---	---
black greasewood	SAVE4	---	40-60	---	2-8	---	60-75
fourwing saltbush	ATCA2	---	5-10	---	---	---	---
gray molly kochia	KOAMV	---	---	2-5	15-25	---	---
iodinebush	ALOC2	50-60	---	---	---	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	---	2-5
shadscale	ATCO	---	5-10	---	5-10	---	2-5
sickle saltbush	ATPA	---	---	45-55	50-60	---	---
winterfat	EULA5	---	---	2-8	---	---	---
Range site number		028AY009NV	028BY021NV	028AY033NV	028AY020NV	None	028BY020NV
Potential production (lb/acre):							
Favorable years		150	400	700	500		500
Normal years		100	300	500	350		300
Unfavorable years		75	200	350	200		150

161--SALTAIR-PLAYAS ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		SALTAIR	PLAYAS	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORRY	---	---	2-5	---	---
bottlebrush squirreltail	SIHY	---	---	2-5	---	---
bulrush	SCIRP	---	---	---	---	30-50
cattail	TYPEA	---	---	---	---	20-40
giantreed	ARDO4	---	---	---	---	5-10
inland saltgrass	DISPS2	20-30	---	---	75-95	---
rush	JuncU	---	---	---	---	2-8
sedge	CAREX	---	---	---	---	2-8
black grassewood	SAVE4	---	---	20-30	---	---
bud sagebrush	ARSP5	---	---	2-10	---	---
iodinebush	ALOC2	50-60	---	---	---	---
shadscale	ATCO	---	---	20-50	---	---
Range site number		028AY009NV	None	028BY074NV	028AY045NV	028BY044NV
Potential production (lb/acre):						
Favorable years		150		600	3500	4000
Normal years		100		400	2500	2800
Unfavorable years		75		200	1000	2000

171--LORAY-GRAVIER-TOANO ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		LORAY	GRAVIER	TOANO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	40-50	15-25	35-45	10-25	25-35	2-5
Letterman needlegrass	STLE4	X	---	---	---	---	---	---
Sandberg bluegrass	POSE	---	---	---	---	2-5	---	---
bluebunch wheatgrass	AGSP	X	---	---	---	---	---	---
bottlebrush squirreltail	SIHY	---	---	5-10	---	---	2-5	2-5
galleta	HIJA	---	2-8	---	2-8	2-8	2-5	---
muttongrass	POFE	X	---	---	---	---	---	---
needleandthread	STCO4	---	---	---	2-8	2-10	---	---
sand dropseed	SPCR	---	---	---	2-5	---	2-5	---
sedge	CAREX	X	---	---	---	---	---	---
spike-fescue	LEKI2	X	---	---	---	---	---	---
creeping barberry	BERE	X	---	---	---	---	---	---
globeamallow	SPHAE	---	2-5	2-5	2-5	---	2-5	---
goldenweed	HAPLO2	X	---	---	---	---	---	---
princesplume	STANL	---	---	---	---	---	2-5	---
Nevada ophedra	EPNE	---	---	---	---	---	2-5	---
black greasewood	SAVE4	---	---	---	---	---	---	20-30
black sagebrush	ARARN	---	---	---	---	15-30	---	---
bud sagebrush	ARSP5	---	2-8	---	2-10	---	2-5	2-10
common juniper	JUCO6	X	---	---	---	---	---	---
fourwing saltbush	ATCA2	---	---	2-5	---	---	---	---
horsebrush	TETRA3	---	---	---	---	---	5-10	---
mountain big sagebrush	ARVA2	X	---	---	---	---	---	---
other shrubs	SSSS	---	---	5-15	---	---	---	---
serviceberry	AMELA	X	---	---	---	---	---	---
shadscale	ATCO	---	1-5	---	20-30	2-5	15-25	20-50
winterfat	EULA5	---	25-30	50-60	5-15	5-10	5-10	---
bristlecone pine	PIAR	X	---	---	---	---	---	---
limber pine	PIFL2	X	---	---	---	---	---	---
white fir	ABCO	X	---	---	---	---	---	---
Range site number		028BY063NV	028AY002NV	028AY030NV	028AY018NV	028AY004NV	028AY014NV	028BY074NV
Potential production (lb/acre):								
Favorable years		800	800	700	700	500	600	600
Normal years		500	600	500	500	325	400	400
Unfavorable years		300	400	350	300	100	200	200

173--CLIFFDOWN-ARMESPAN-IZAMATCH ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		CLIFFDOWN	ARMESPAN	IZAMATCH	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	35-45	10-25	25-35	10-25	15-25	40-50	5-10
Sandberg bluegrass	POSE	---	2-5	---	2-5	2-5	---	---
bottlebrush squirreltail	SIHY	---	---	2-5	---	---	---	2-5
galleta	HIJA	2-8	2-8	2-5	2-8	1-5	2-8	1-4
needleandthread	STCO4	2-8	2-10	---	2-10	5-10	---	---
sand dropseed	SPCR	2-5	---	2-5	---	---	---	---
globemallow	SPRAE	2-5	---	2-5	---	2-5	2-5	2-5
princesplume	STANL	---	---	2-5	---	---	---	---
Nevada ephedra	EPNE	---	---	2-5	---	---	---	2-15
black sagebrush	ARARN	---	15-30	---	15-30	15-25	---	---
bud sagebrush	ARSP5	2-10	---	2-5	---	---	2-8	---
fourwing saltbush	ATCA2	---	---	---	---	---	---	5-30
horsebrush	TETRA3	---	---	5-10	---	---	---	---
rabbitbrush	CHRY99	---	---	---	---	---	---	5-20
shadscale	ATCO	20-30	2-5	15-25	2-5	---	1-5	2-5
spiny hopsage	GRSP	---	---	---	---	20-30	---	5-20
winterfat	EULA5	5-15	5-10	5-10	5-10	---	25-30	---
Range site number		028AY018NV	028AY004NV	028AY014NV	028AY004NV	028AY047NV	028AY002NV	028AY037NV
Potential production (lb/acre):								
Favorable years		700	500	600	500	600	800	600
Normal years		500	325	400	325	400	600	500
Unfavorable years		300	100	200	100	200	400	400

174--WINTERMUTE-LINOYER-OKAN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		WINTERMUTE	LINOYER	OKAN	Inclusion 1	Inclusion 2
Indian ricegrass	ORRY	40-50	15-25	15-25	20-35	40-50
Sandberg bluegrass	POSE	---	---	---	2-8	---
bottlebrush squirreltail	SIHY	2-5	5-10	2-5	2-5	2-5
needleandthread	STCO4	---	---	5-10	5-15	---
other perennial grasses	PPGG	---	2-5	---	---	---
globemallow	SPHAE	1-5	2-5	---	---	---
scarlet globemallow	SPCO	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	20-35	---	---
black sagebrush	ARARN	---	---	---	25-35	---
bud sagebrush	ARSP5	---	2-8	---	---	5-15
downy rabbitbrush	CHVIP4	---	---	---	2-5	---
fourwing saltbush	ATCA2	---	2-5	---	---	---
shadscale	ATCO	25-35	---	2-5	2-5	---
spiny hopsage	GRSP	---	---	5-20	---	---
winterfat	EULA5	5-10	40-50	---	---	20-30
Range site number		028BY075NV	028BY013NV	028BY052NV	028BY011NV	028BY084NV
Potential production (lb/acre):						
Favorable years		700	700	800	600	900
Normal years		500	500	600	450	700
Unfavorable years		300	350	450	250	400

175--LORAY-WINTERMUTE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		LORAY	WINTERMUTE	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORBY	15-25	40-50	20-30	20-35	2-10
King desertgrass	BLKI	2-5	---	---	---	---
Sandberg bluegrass	POSE	---	---	2-5	2-8	---
basin wildrye	ELCI2	---	---	---	---	10-20
bottlebrush squirreltail	SIHY	---	2-5	2-8	2-5	---
galleta	HIJA	2-8	---	---	---	---
needleandthread	STCO4	---	---	10-20	5-15	---
globemallow	SPHAE	2-5	1-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	25-35	---	---
big sagebrush	ARTR2	---	---	---	---	20-30
black greasewood	SAVE4	---	---	---	---	30-40
black sagebrush	ARARN	---	---	---	25-35	---
bud sagebrush	ARSP5	5-10	---	---	---	---
downy rabbitbrush	CHVIP4	---	---	---	2-5	---
gray molly kochia	KOAMV	2-5	---	---	---	---
rabbitbrush	CHRY89	---	---	2-5	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	2-5
shadscale	ATCO	40-50	25-35	---	2-5	---
winterfat	EULA5	2-8	5-10	---	---	---
Range site number		028AY012NV	028BY075NV	028BY010NV	028BY011NV	028BY028NV
Potential production (lb/acre):						
Favorable years		500	700	800	600	800
Normal years		300	500	600	450	600
Unfavorable years		200	300	400	250	400

176--ZERK-LORAY ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		LORAY	ZERK	ZERK	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Baltic rush	JUBA	2-5	---	---	---	---	---	---
Indian ricegrass	ORRY	---	40-50	---	15-25	1-5	2-8	20-30
Sandberg bluegrass	POSE	---	---	---	---	---	---	2-5
alkali bluegrass	POJU	2-10	---	---	---	---	---	---
alkali muhly	MUAS	2-5	---	---	---	---	---	---
alkali sacaton	SPAI	2-10	---	---	---	---	---	---
blue grama	BOGR2	---	---	X	---	---	---	---
bluebunch wheatgrass	AGSP	---	---	X	---	---	---	---
bluegrass	POA++	---	---	X	---	---	---	---
bottlebrush squirreltail	SIHY	---	2-5	X	5-10	5-10	2-5	2-8
inland saltgrass	DISPS2	5-15	---	---	---	---	---	---
muttongrass	POPE	---	---	X	---	---	---	---
needleandthread	STCO4	---	---	---	---	---	---	10-20
other perennial grasses	PPGG	---	---	---	2-5	---	---	---
sedge	CAREX	10-20	---	---	---	---	---	---
western wheatgrass	AGSM	35-50	---	---	---	---	5-15	---
wildrye	ELYMU	5-15	---	---	---	---	---	---
globemallow	SPRAE	---	---	---	2-5	---	---	---
penstemon	PENST	---	---	X	---	---	---	---
phlox	PHLOX	---	---	X	---	---	---	---
Douglas rabbitbrush	CHV18	---	---	X	---	---	---	---
Utah serviceberry	AMUT	---	---	X	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	25-35
bud sagebrush	ARSP5	---	5-15	---	2-8	---	---	---
curlleaf mountainmahogany	CELE3	---	---	X	---	---	---	---
fourwing saltbush	ATCA2	---	---	---	2-5	---	---	---
green ophedra	BPVI	---	---	X	---	---	---	---
greenleaf manzanita	ARPA6	---	---	X	---	---	---	---
low sagebrush	ARAR8	---	---	X	---	---	---	---
rabbitbrush	CHRY89	---	---	---	---	---	---	2-5
shadscale	ATCO	---	---	---	---	85-90	2-5	---
sickle saltbush	ATPA	---	---	---	---	---	55-65	---
winterfat	EULA5	---	20-30	---	40-50	---	5-15	---
Utah juniper	JUOS	---	---	X	---	---	---	---
singleleaf pinyon	PIMO	---	---	X	---	---	---	---
white fir	ABCO	---	---	X	---	---	---	---

Range site number	028BY012NV	028BY084NV	028AY075NV	028BY013NV	028BY073NV	028BY047NV	028BY010NV
Potential production (lb/acre):							
Favorable years	2000	900	500	700	400	500	800
Normal years	1500	700	300	500	300	350	600
Unfavorable years	1000	400	150	350	200	200	400

181--PEEKO-DEWAR ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		PEEKO	DEWAR	PEEKO	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	5-15	---	5-15	---	15-30	---
Sandberg bluegrass	POSE	---	2-5	---	2-5	---	2-5
Thurber needlegrass	STTH2	15-30	15-25	15-30	15-25	---	15-25
basin wildrye	ELCT2	---	---	---	---	2-8	---
bluebunch wheatgrass	AGSP	---	25-40	---	25-40	---	25-40
bottlebrush squirreltail	SIHY	---	---	---	---	5-10	---
globemallow	SPHAR	2-5	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	---	15-25	---	15-25	15-30	15-25
antelope bitterbrush	PUTR2	---	---	---	---	2-8	---
black sagebrush	ARARN	25-35	---	25-35	---	10-20	---
spiny hopsage	GRSP	---	---	---	---	2-5	---
Range site number		024XY030NV	025XY019NV	024XY030NV	025XY019NV	025XY025NV	025XY019NV
Potential production (lb/acre):							
Favorable years		500	800	500	800	500	800
Normal years		350	600	350	600	350	600
Unfavorable years		250	400	250	400	200	400

182--PEEKO-GANCE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		PEEKO	PEEKO	GANCE	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	5-15	5-15	---	---	5-15	---
Sandberg bluegrass	POSE	---	---	2-5	2-5	---	---
Thurber needlegrass	STH2	15-30	15-30	15-25	15-25	15-30	10-20
basin wildrye	ELCT2	---	---	---	---	---	2-8
bluebunch wheatgrass	AGSP	---	---	25-40	25-40	---	20-35
bluegrass	POA++	---	---	---	---	---	2-10
globemallow	SPHAE	2-5	2-5	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	15-25	15-25	---	---
antelope bitterbrush	PUTR2	---	---	---	---	---	2-8
big sagebrush	ARTR2	---	---	---	---	---	10-20
black sagebrush	ARARN	25-35	25-35	---	---	25-35	---
Range site number		024XY030NV	024XY030NV	025XY019NV	025XY019NV	024XY030NV	025XY014NV
Potential production (lb/acre):							
Favorable years		500	500	800	800	500	1000
Normal years		350	350	600	600	350	800
Unfavorable years		250	250	400	400	250	600

183--PEEKO-ENKO-IZAR ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		PEEKO	ENKO	IZAR	Inclusion 1	Inclusion 2
Indian ricegrass	ORBY	5-15	---	5-15	X	X
Sandberg bluegrass	POSE	---	2-5	---	---	---
Thurber needlegrass	STTH2	15-30	15-25	15-30	X	X
basin wildrye	ELCI2	---	---	---	X	---
bluebunch wheatgrass	AGSP	---	25-40	---	X	X
bluegrass	POA++	---	---	---	X	X
bottlebrush squirreltail	SIEY	---	---	---	X	---
arrowleaf balsamroot	BASA3	---	---	---	X	---
globemallow	SPHAE	2-5	---	2-5	---	---
goldenweed	HAPLO2	---	---	---	---	X
phlox	PHLOX	---	---	---	---	X
tapertip hawkbeard	CRAC2	---	---	---	X	---
Stansbury cliffrose	COMES	---	---	---	X	---
Wyoming big sagebrush	ARTRW	---	15-25	---	---	---
antelope bitterbrush	PUTR2	---	---	---	X	---
black sagebrush	ARARN	25-35	---	25-35	X	X
curlleaf mountainmahogany	CELE3	---	---	---	X	---
downy rabbitbrush	CHVIP4	---	---	---	---	X
serviceberry	AMELA	---	---	---	X	---
Utah juniper	JUOS	---	---	---	X	X
singleleaf pinyon	PIMO	---	---	---	X	---
Range site number		024XY030NV	025XY019NV	024XY030NV	028BY060NV	025XY060NV
Potential production (lb/acre):						
Favorable years		500	800	500	500	400
Normal years		350	600	350	300	275
Unfavorable years		250	400	250	250	150

185--PEEKO-CHIARA ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		PEEKO	PEEKO	CHIARA	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	5-15	5-15	---	2-5	---	---	X
Sandberg bluegrass	POSE	---	---	2-5	---	2-5	2-5	---
Thurber needlegrass	STH2	15-30	15-30	15-25	10-20	15-25	15-25	X
bluebunch wheatgrass	AGSP	---	---	25-40	20-35	25-40	25-40	X
bluegrass	POA++	---	---	---	---	---	---	X
globemallow	SPHAE	2-5	2-5	---	---	---	---	---
goldenweed	HAPLO2	---	---	---	---	---	---	X
phlox	PHLOX	---	---	---	---	---	---	X
Wyoming big sagebrush	ARTRW	---	---	15-25	---	15-25	15-25	---
black sagebrush	ARARN	25-35	25-35	---	25-35	---	---	X
downy rabbitbrush	CHVIP4	---	---	---	---	---	---	X
Utah juniper	JUOS	---	---	---	---	---	---	X
Range site number		024XY030NV	024XY030NV	025XY019NV	024XY031NV	025XY019NV	025XY019NV	025XY060NV
Potential production (lb/acre):								
Favorable years		500	500	800	700	800	800	400
Normal years		350	350	600	500	600	600	275
Unfavorable years		250	250	400	300	400	400	150

186--PALINOR-PHARO-HUNDRAW ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		PALINOR	PHARO	HUNDRAW	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	20-35	10-20	X	20-30	40-50	40-50
Sandberg bluegrass	POSE	2-8	---	---	2-5	---	---
Thurber needlegrass	STPH2	---	---	X	---	---	---
bluebunch wheatgrass	AGSP	---	20-40	X	---	---	---
bluegrass	POA++	---	---	X	---	---	---
bottlebrush squirreltail	SIHY	2-5	---	---	2-8	2-5	2-5
muttongrass	POPE	---	2-8	---	---	---	---
needleandthread	STCO4	5-15	2-5	---	10-20	---	---
globemallow	SPHAE	---	---	---	---	1-5	---
goldenweed	HAPLO2	---	---	X	---	---	---
phlox	PHLOX	---	---	X	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	---
black sagebrush	ARARN	25-35	20-30	X	---	---	---
bud sagebrush	ARSP5	---	---	---	---	---	5-15
downy rabbitbrush	CHVIP4	2-5	---	X	---	---	---
rabbitbrush	CHRY9	---	---	---	2-5	---	---
shadscale	ATCO	2-5	---	---	---	25-35	---
winterfat	EULAS	---	2-5	---	---	5-10	20-30
Utah juniper	JUOS	---	---	X	---	---	---
Range site number		028BY011NV	028BY006NV	025XY060NV	028BY010NV	028BY075NV	028BY084NV
Potential production (lb/acre):							
Favorable years		600	800	400	800	700	900
Normal years		450	600	275	600	500	700
Unfavorable years		250	400	150	400	300	400

187--PEEKO-IZAR ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		PEEKO	IZAR	IZAR	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-35	X	10-20	20-30	40-50	X	---
Sandberg bluegrass	POSE	2-8	---	2-5	2-5	---	---	---
Thurber needlegrass	STH2	---	---	---	---	---	X	---
basin wildrye	ELCI2	---	X	---	---	---	X	---
bluebunch wheatgrass	AGSP	---	---	---	---	---	X	---
bluegrass	POA++	---	X	---	---	---	X	---
bottlebrush squirreltail	SIHY	2-5	X	2-5	2-8	2-5	X	---
needleandthread	STCO4	5-15	X	10-20	10-20	---	---	---
arrowleaf balsamroot	BASA3	---	---	---	---	---	X	---
globemallow	SPHAE	---	---	---	---	1-5	---	---
tapertip hawkbeard	CRAC2	---	---	---	---	---	X	---
thickstem wildcabbage	CACR11	---	X	---	---	---	---	---
Stansbury cliffrose	COMES	---	---	---	---	---	X	---
Utah juniper	JUOS	---	X	---	---	---	X	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	---	---
antelope bitterbrush	PUTR2	---	X	---	---	---	X	---
black sagebrush	ARARN	25-35	X	35-45	---	---	X	---
curlleaf mountainmahogany	CELE3	---	---	---	---	---	X	---
downy rabbitbrush	CHVIP4	2-5	---	---	---	---	---	---
rabbitbrush	CHRY89	---	---	---	2-5	---	---	---
serviceberry	AMELA	---	---	---	---	---	X	---
shadscale	ATCO	2-5	---	2-5	---	25-35	---	---
winterfat	EULA5	---	---	---	---	5-10	---	---
Utah juniper	JUOS	---	X	---	---	---	X	---
singleleaf pinyon	PIMO	---	---	---	---	---	X	---

Range site number	028BY011NV	028BY083NV	028BY016NV	028BY010NV	028BY075NV	028BY060NV	None
Potential production (lb/acre):							
Favorable years	600	300	350	800	700	500	
Normal years	450	200	225	600	500	300	
Unfavorable years	250	125	100	400	300	250	

188--PALINOR-AUTOMAL-IZAR ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		PALINOR	AUTOMAL	IZAR	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-35	10-20	X	10-20	20-30	40-50	X
Sandberg bluegrass	POSE	2-8	2-5	---	---	2-5	---	---
Thurber needlegrass	STTH2	---	---	---	---	---	---	X
basin wildrye	ELCY2	---	---	X	---	---	---	X
bluebunch wheatgrass	AGSP	---	---	---	20-40	---	---	X
bluegrass	POA++	---	---	X	---	---	---	X
bottlebrush squirreltail	SIHY	2-5	2-5	X	---	2-8	2-5	X
muttongrass	POPE	---	---	---	2-8	---	---	---
needleandthread	STCO4	5-15	10-20	X	2-5	10-20	---	---
arrowleaf balsamroot	BASA3	---	---	---	---	---	---	X
globemallow	SPHAE	---	---	---	---	---	1-5	---
tapertip hawksbeard	CRAC2	---	---	---	---	---	---	X
thickstem wildcabbage	CACR11	---	---	X	---	---	---	---
Stansbury cliffrose	COMES	---	---	---	---	---	---	X
Utah juniper	JUOS	---	---	X	---	---	---	X
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	---	---
antelope bitterbrush	PUTR2	---	---	X	---	---	---	X
black sagebrush	ARARN	25-35	35-45	X	20-30	---	---	X
curlleaf mountainmahogany	CELE3	---	---	---	---	---	---	X
downy rabbitbrush	CHVIP4	2-5	---	---	---	---	---	---
rabbitbrush	CHRY89	---	---	---	---	2-5	---	---
serviceberry	AMELA	---	---	---	---	---	---	X
shadscale	ATCO	2-5	2-5	---	---	---	25-35	---
winterfat	EULA5	---	---	---	2-5	---	5-10	---
Utah juniper	JUOS	---	---	X	---	---	---	X
singleleaf pinyon	PIMO	---	---	---	---	---	---	X
Range site number		028BY011NV	028BY016NV	028BY083NV	028BY006NV	028BY010NV	028BY075NV	028BY060NV
Potential production (lb/acre):								
Favorable years		600	350	300	800	800	700	500
Normal years		450	225	200	600	600	500	300
Unfavorable years		250	100	125	400	400	300	250

192--HUTCHLEY-SIMON ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		HUTCHLEY	SIMON	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	---	40-60	---	---	---
Letterman needlegrass	STLE4	---	---	---	X	---
Nevada bluegrass	PONE3	---	2-8	---	---	---
Thurber needlegrass	STTH2	10-20	---	---	---	---
basin wildrye	ELCI2	---	2-8	---	---	---
bluebunch wheatgrass	AGSP	20-40	5-15	20-30	X	---
bluegrass	POA++	5-10	---	---	---	---
muttongrass	POPE	---	---	2-8	X	---
needlegrass	STIPA	---	---	5-15	---	---
pine needlegrass	STPI2	2-8	---	---	---	---
sedge	CAREX	---	---	---	X	---
spike-fescue	LEKI2	---	---	---	X	---
creeping barberry	BERE	---	---	---	X	---
goldenweed	HAPLO2	2-5	---	---	X	---
basin big sagebrush	ARTRT	---	10-20	---	---	---
common juniper	JUCO6	---	---	---	X	---
mountain big sagebrush	ARVA2	---	---	15-25	X	---
sagebrush	ARTEM	35-45	---	---	---	---
serviceberry	AMELA	---	---	---	X	---
snowberry	SYMPH	---	---	2-8	---	---
bristlecone pine	PIAR	---	---	---	X	---
curlleaf mountainmahogany	CELE3	---	---	15-25	---	---
limber pine	PIPL2	---	---	---	X	---
white fir	ABCO	---	---	---	X	---
Range site number		028BY034NV	025XY027NV	028BY043NV	028BY063NV	None
Potential production (lb/acre):						
Favorable years		350	1300	1700	800	
Normal years		200	900	1300	500	
Unfavorable years		100	500	900	300	

201--TECOMar-HOPEKA-ROCK OUTCROP ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		TECOMar	HOPEKA	ROCK OUTCROP	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	2-5	X	---	2-8	10-20
Thurber needlegrass	STTH2	10-20	X	---	10-20	---
basin wildrye	ELCI2	---	X	---	---	---
bluebunch wheatgrass	AGSP	20-35	X	---	30-40	20-40
bluegrass	POA++	---	X	---	---	---
bottlebrush squirreltail	SIHY	---	X	---	---	---
muttongrass	POFE	---	---	---	---	2-8
needleandthread	STCO4	---	---	---	---	2-5
arrowleaf balsamroot	BASA3	---	X	---	---	---
tapertip hawkbeard	CRAC2	---	X	---	---	---
Stansbury cliffrose	COMES	---	X	---	---	---
antelope bitterbrush	PUTR2	---	X	---	---	---
black sagebrush	ARARN	25-35	X	---	20-30	20-30
curlleaf mountainmahogany	CELE3	---	X	---	---	---
serviceberry	AMELA	---	X	---	---	---
winterfat	EULA5	---	---	---	---	2-5
Utah juniper	JUOS	---	X	---	---	---
singleleaf pinyon	PIMO	---	X	---	---	---
Range site number		024XY031NV	028BY060NV	None	025XY057NV	028BY006NV
Potential production (lb/acre):						
Favorable years		700	500		700	800
Normal years		500	300		500	500
Unfavorable years		300	250		300	400

203--TECOMar-POOKALOO-PHARO ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or inclusion number--					
		TECOMar	POOKALOO	PHARO	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORRY	10-20	X	10-20	10-20	15-30	---
Nevada bluegrass	PONE3	---	---	---	---	---	5-10
Thurber needlegrass	STTH2	---	X	---	---	---	---
basin wildrye	ELCI2	---	X	---	---	---	70-80
bluebunch wheatgrass	AGSP	20-40	X	20-40	20-40	30-40	---
bluegrass	POA++	2-5	X	---	---	5-10	---
bottlebrush squirreltail	SIHY	---	X	---	---	---	---
muttongrass	POPE	---	---	2-8	2-8	---	---
needleandthread	STCO4	2-5	---	2-5	2-5	---	---
arrowleaf balsamroot	BASA3	---	X	---	---	---	---
goldenweed	HAPLO2	2-5	---	---	---	---	---
tapertip hawkbeard	CRAC2	2-5	X	---	---	---	---
Stansbury cliffrose	COMES	---	X	---	---	---	---
antelope bitterbrush	PUR2	---	X	---	---	5-10	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10
black sagebrush	ARARN	25-35	X	20-30	20-30	---	---
curlleaf mountainmahogany	CELE3	---	X	---	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	15-25	---
serviceberry	AMELA	---	X	---	---	---	---
shadscale	ATCO	2-5	---	---	---	---	---
winterfat	EULA5	2-5	---	2-5	2-5	---	---
Utah juniper	JUOS	---	X	---	---	---	---
singleleaf pinyon	PIMO	---	X	---	---	---	---
Range site number		028BY003NV	028BY060NV	028BY006NV	028BY006NV	028BY079NV	028BY003NV
Potential production (lb/acre):							
Favorable years		600	500	800	800	700	5000
Normal years		400	300	600	600	500	2500
Unfavorable years		200	250	400	400	300	1500

210--MAZUMA-HARDHAT-LORAY ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or inclusion number--					
		MAZUMA	HARDHAT	LORAY	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	2-5	1-5	15-25	15-25	---	10-15
King desertgrass	BLKI	---	---	2-5	---	---	---
alkali sacaton	SPAI	---	---	---	---	5-10	---
basin wildrye	ELCI2	---	---	---	---	2-5	---
bottlebrush squirreltail	SIHY	2-5	5-10	---	5-10	---	2-5
galleta	HIJA	---	---	2-8	---	---	---
inland saltgrass	DISPS2	---	---	---	---	2-8	---
other perennial grasses	PPGG	---	---	---	2-5	---	---
globemallow	SPHAE	---	---	2-5	2-5	---	---
black greasewood	SAVE4	20-30	---	---	---	60-75	15-25
bud sagebrush	ARSP5	2-10	---	5-10	2-8	---	---
fourwing saltbush	ATCA2	---	---	---	2-5	---	---
gray molly kochia	KOAMV	---	---	2-5	---	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	2-5	---
shadscale	ATCO	20-50	85-90	40-50	---	2-5	---
spiny hopsage	GRSP	---	---	---	---	---	40-60
winterfat	EULA5	---	---	2-8	40-50	---	---
Range site number		028BY074NV	028BY073NV	028AY012NV	028BY013NV	028BY020NV	028AY032NV
Potential production (lb/acre):							
Favorable years		600	400	500	700	500	1000
Normal years		400	300	300	500	300	800
Unfavorable years		200	200	200	350	150	600

211--VALMY-ENKO ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		VALMY	ENKO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	2-5	---	---	---	5-15	---
Sandberg bluegrass	POSE	---	2-5	2-5	---	---	2-5
Thurber needlegrass	STTH2	---	15-25	15-25	---	15-30	15-25
basin wildrye	ELCI2	5-20	---	---	15-20	---	---
bluebunch wheatgrass	AGSP	---	25-40	25-40	---	---	25-40
bottlebrush squirreltail	SIHY	2-5	---	---	2-10	---	---
inland saltgrass	DISPS2	---	---	---	2-8	---	---
globemallow	SPHA2	1-2	---	---	---	2-5	---
thelypody	THELY	2-4	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	15-25	15-25	---	---	15-25
big sagebrush	ARTR2	10-25	---	---	---	---	---
black greasewood	SAVE4	20-30	---	---	50-65	---	---
black sagebrush	ARARN	---	---	---	---	25-35	---
spiny hopsage	GRSP	5-15	---	---	---	---	---
Range site number		024XY022NV	025XY019NV	025XY019NV	024XY008NV	024XY030NV	025XY019NV
Potential production (lb/acre):							
Favorable years		800	800	800	700	500	800
Normal years		600	600	600	450	350	600
Unfavorable years		350	400	400	300	250	400

230--ZAFOD-PYRAT-PALINOR ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or inclusion number--				
		ZAFOD	PYRAT	PALINOR	Inclusion 1	Inclusion 2
Indian ricegrass	ORRY	2-5	20-30	20-35	2-5	---
Sandberg bluegrass	POSE	---	2-5	2-8	---	---
Thurber needlegrass	STTH2	30-40	---	---	30-40	---
bluebunch wheatgrass	AGSP	15-30	---	---	15-30	---
bluegrass	POA++	2-8	---	---	2-8	---
bottlebrush squirreltail	SIRY	---	2-8	2-5	---	---
needleandthread	STCO4	2-8	10-20	5-15	2-8	---
arrowleaf balsamroot	BASA3	2-5	---	---	2-5	---
tapertip hawksbeard	CRAC2	2-5	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	---
antelope bitterbrush	POTR2	2-10	---	---	2-10	---
big sagebrush	ARTR2	15-25	---	---	15-25	---
black sagebrush	ARARN	---	---	25-35	---	---
downy rabbitbrush	CHVIP4	---	---	2-5	---	---
rabbitbrush	CHRY9	---	2-5	---	---	---
shadscale	ATCO	---	---	2-5	---	---
Range site number		028BY007NV	028BY010NV	028BY011NV	028BY007NV	None
Potential production (lb/acre):						
Favorable years		1000	800	600	1000	
Normal years		800	600	450	800	
Unfavorable years		600	400	250	600	

231--DACKER-NEVADOR-KELK ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		DACKER	NEVADOR	KELK	Inclusion 1	Inclusion 2	Inclusion 3
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	800
Normal years		600	600	600	600	600	600
Unfavorable years		400	400	400	400	400	400

240--HUNDRAW-COBRE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		HUNDRAW	COBRE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	5-15	---	15-30	15-25	5-15	15-25
Sandberg bluegrass	POSE	---	2-5	---	---	---	---
Thurber needlegrass	STH2	15-30	15-25	---	---	15-30	---
basin wildrye	ELCI2	---	---	2-8	---	---	---
bluebunch wheatgrass	AGSP	---	25-40	---	---	---	---
bottlebrush squirreltail	SIEY	---	---	5-10	2-5	---	5-10
needleandthread	STCO4	---	---	---	5-10	---	---
other perennial grasses	PPGG	---	---	---	---	---	2-5
globemallow	SPHAE	2-5	---	---	---	2-5	2-5
scarlet globemallow	SPCO	---	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	15-25	15-30	20-35	---	---
antelope bitterbrush	PUTR2	---	---	2-8	---	---	---
black sagebrush	ARARN	25-35	---	10-20	---	25-35	---
bud sagebrush	ARSP5	---	---	---	---	---	2-8
fourwing saltbush	ATCA2	---	---	---	---	---	2-5
shadscale	ATCO	---	---	---	2-5	---	---
spiny hopsage	GRSP	---	---	2-5	5-20	---	---
winterfat	EULAS	---	---	---	---	---	40-50
Range site number		024XY030NV	025XY019NV	025XY025NV	028BY052NV	024XY030NV	028BY013NV
Potential production (lb/acre):							
Favorable years		500	800	500	800	500	700
Normal years		350	600	350	600	350	500
Unfavorable years		250	400	200	450	250	350

241--HUNDRAN-PEEKO-KZIN ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		HUNDRAN	PEEKO	KZIN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	20-35	20-35	X	20-35	5-10	10-20	20-35
Sandberg bluegrass	POSE	2-8	2-8	---	2-8	---	---	2-8
Thurber needlegrass	STTH2	---	---	X	---	---	---	---
basin wildrye	ELCI2	---	---	X	---	10-20	---	---
bluebunch wheatgrass	AGSP	---	---	X	---	---	20-40	---
bluegrass	POA++	---	---	X	---	---	---	---
bottlebrush squirreltail	SIHY	2-5	2-5	X	2-5	---	---	2-5
muttongrass	POFE	---	---	---	---	---	2-8	---
needleandthread	STCO4	5-15	5-15	---	5-15	---	2-5	5-15
thickspike wheatgrass	AGDA	---	---	---	---	5-10	---	---
arrowleaf balsamroot	BASA3	---	---	X	---	---	---	---
tapertip hawksbeard	CRAC2	---	---	X	---	---	---	---
Stansbury cliffrose	COMES	---	---	X	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	---	---
antelope bitterbrush	PUTR2	---	---	X	---	---	---	---
black sagebrush	ARARN	25-35	25-35	X	25-35	---	20-30	25-35
curlleaf mountainmahogany	CELE3	---	---	X	---	---	---	---
downy rabbitbrush	CHVIP4	2-5	2-5	---	2-5	---	---	2-5
serviceberry	AMELA	---	---	X	---	---	---	---
shadscale	ATCO	2-5	2-5	---	2-5	---	---	2-5
winterfat	EULA5	---	---	---	---	---	2-5	---
Utah juniper	JUOS	---	---	X	---	---	---	---
singleleaf pinyon	PIMO	---	---	X	---	---	---	---
Range site number		028BY011NV	028BY011NV	028BY060NV	028BY011NV	028BY045NV	028BY006NV	028BY011NV
Potential production (lb/acre):								
Favorable years		600	600	500	600	1000	800	600
Normal years		450	450	300	450	800	600	450
Unfavorable years		250	250	250	250	600	400	250

242--COBRE-HUNDRAW-CHIARA ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		COBRE	HUNDRAW	CHIARA	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	20-30	X	20-30	10-20	X	15-25
Sandberg bluegrass	POSE	2-5	---	2-5	---	---	---
basin wildrye	ELCI2	---	X	---	---	X	---
bluebunch wheatgrass	AGSP	---	---	---	20-40	---	---
bluegrass	POA++	---	X	---	---	X	---
bottlebrush squirreltail	SIHY	2-8	X	2-8	---	X	2-5
muttongrass	POFE	---	---	---	2-8	---	---
needleandthread	STCO4	10-20	X	10-20	2-5	X	5-10
scarlet globemallow	SPCO	---	---	---	---	---	2-5
thickstem wildcabbage	CACR11	---	X	---	---	X	---
Utah juniper	JUOS	---	X	---	---	X	---
Wyoming big sagebrush	ARTRW	25-35	---	25-35	---	---	20-35
antelope bitterbrush	PUTR2	---	X	---	---	X	---
black sagebrush	ARARN	---	X	---	20-30	X	---
rabbitbrush	CHRY89	2-5	---	2-5	---	---	---
shadscale	ATCO	---	---	---	---	---	2-5
spiny hopsage	GRSP	---	---	---	---	---	5-20
winterfat	EULAS	---	---	---	2-5	---	---
Range site number		028BY010NV	028BY083NV	028BY010NV	028BY006NV	028BY083NV	028BY052NV
Potential production (lb/acre):							
Favorable years		800	300	800	800	300	800
Normal years		600	200	600	600	200	600
Unfavorable years		400	125	400	400	125	450

244--HUNDRAW-SHABLISS-PALINOR ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		HUNDRAW	SHABLISS	PALINOR	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-35	20-30	20-35	X	20-30	20-30	5-10
Sandberg bluegrass	POSE	2-8	2-5	2-8	---	2-5	---	---
basin wildrye	ELCI2	---	---	---	X	---	---	10-20
bluegrass	PCA++	---	---	---	X	---	---	---
bottlebrush squirreltail	SIRY	2-5	2-8	2-5	X	2-8	10-20	---
needleandthread	STCO4	5-15	10-20	5-15	X	10-20	---	---
thickspike wheatgrass	AGDA	---	---	---	---	---	---	5-10
globemallow	SPHAE	---	---	---	---	---	2-4	---
thickstem wildcabbage	CACR11	---	---	---	X	---	---	---
Utah juniper	JUOS	---	---	---	X	---	---	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	25-35	---	25-35
antelope bitterbrush	PUTR2	---	---	---	X	---	---	---
black sagebrush	ARARN	25-35	---	25-35	X	---	---	---
downy rabbitbrush	CHVIP4	2-5	---	2-5	---	---	---	---
rabbitbrush	CHRY99	---	2-5	---	---	2-5	---	---
shadscale	ATCO	2-5	---	2-5	---	---	45-50	---
Range site number		028BY011NV	028BY010NV	028BY011NV	028BY083NV	028BY010NV	028BY009NV	028BY045NV
Potential production (lb/acre):								
Favorable years		600	800	600	300	800	500	1000
Normal years		450	600	450	200	600	400	800
Unfavorable years		250	400	250	125	400	300	600

250--IZAR-HOLBORN-KZIN ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		IZAR	HOLBORN	KZIN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-35	10-20	X	20-30	20-35	15-30	20-30
Sandberg bluegrass	POSR	2-8	---	---	2-5	2-8	---	2-5
Thurber needlegrass	STTH2	---	---	X	---	---	---	---
basin wildrye	ELCI2	---	---	X	---	---	2-8	---
bluebunch wheatgrass	AGSP	---	20-40	X	---	---	---	---
bluegrass	POA++	---	---	X	---	---	---	---
bottlebrush squizreltail	SIHY	2-5	---	X	2-8	2-5	5-10	2-8
muttongrass	POFE	---	2-8	---	---	---	---	---
needleandthread	STCO4	5-15	2-5	---	10-20	5-15	---	10-20
arrowleaf balsamroot	BASA3	---	---	X	---	---	---	---
tapertip hawksbeard	CRAC2	---	---	X	---	---	---	---
Stansbury cliffrose	COMES	---	---	X	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	15-30	25-35
antelope bitterbrush	PUTR2	---	---	X	---	---	2-8	---
black sagebrush	ARARN	25-35	20-30	X	---	25-35	10-20	---
curlleaf mountainmahogany	CELE3	---	---	X	---	---	---	---
downy rabbitbrush	CHVIP4	2-5	---	---	---	2-5	---	---
rabbitbrush	CHRY89	---	---	---	2-5	---	---	2-5
serviceberry	AMELA	---	---	X	---	---	---	---
shadscale	ATCO	2-5	---	---	---	2-5	---	---
spiny hopsage	GRSP	---	---	---	---	---	2-5	---
winterfat	EULA5	---	2-5	---	---	---	---	---
Utah juniper	JUOS	---	---	X	---	---	---	---
singleleaf pinyon	PINO	---	---	X	---	---	---	---
Range site number		028BY011NV	028BY006NV	028BY060NV	028BY010NV	028BY011NV	025XY025NV	028BY010NV
Potential production (lb/acre):								
Favorable years		600	800	500	800	600	500	800
Normal years		450	600	300	600	450	350	600
Unfavorable years		250	400	250	400	250	200	400

251--IZAR-PALINOR-SHABLISS ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		IZAR	PALINOR	SHABLISS	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-35	20-35	20-30	5-10	40-50	20-30	---
Sandberg bluegrass	POSE	2-8	2-8	2-5	---	---	---	---
bottlebrush squirreltail	SIHY	2-5	2-5	2-8	2-8	2-5	10-20	---
needleandthread	STCO4	5-15	5-15	10-20	---	---	---	---
globemallow	SPHAE	---	---	---	---	1-5	2-4	---
Wyoming big sagebrush	ARTRW	---	---	25-35	---	---	---	---
black sagebrush	ARARN	25-35	25-35	---	---	---	---	---
downy rabbitbrush	CHVIP4	2-5	2-5	---	---	---	---	---
rabbitbrush	CHRY89	---	---	2-5	---	---	---	---
shadscale	NTCO	2-5	2-5	---	---	25-35	45-50	---
winterfat	EULA5	---	---	---	60-70	5-10	---	---
Range site number		028BY011NV	028BY011NV	028BY010NV	028BY018NV	028BY075NV	028BY009NV	None
Potential production (lb/acre):								
Favorable years		600	600	800	500	700	500	
Normal years		450	450	600	350	500	400	
Unfavorable years		250	250	400	200	300	300	

252--IZAR-HUNDRAW-OKAN ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		IZAR	HUNDRAW	OKAN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	20-35	X	20-30	5-10	20-35	15-25	---
Sandberg bluegrass	POSE	2-8	---	2-5	---	2-8	---	---
basin wildrye	ELCI2	---	X	---	10-20	---	---	---
bluegrass	POA++	---	X	---	---	---	---	---
bottlebrush squirreltail	SIHY	2-5	X	2-8	---	2-5	2-5	---
needleandthread	STCO4	5-15	X	10-20	---	5-15	5-10	---
thickspike wheatgrass	AGDA	---	---	---	5-10	---	---	---
scarlet globemallow	SPCO	---	---	---	---	---	2-5	---
thickstem wildcabbage	CACR11	---	X	---	---	---	---	---
Utah juniper	JUOS	---	X	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	25-35	25-35	---	20-35	---
antelope bitterbrush	PUTR2	---	X	---	---	---	---	---
black sagebrush	ARARN	25-35	X	---	---	25-35	---	---
downy rabbitbrush	CHVIP4	2-5	---	---	---	2-5	---	---
rabbitbrush	CHRY9	---	---	2-5	---	---	---	---
shadscale	ATCO	2-5	---	---	---	2-5	2-5	---
spiny hopsage	GRSP	---	---	---	---	---	5-20	---
Range site number		028BY011NV	028BY003NV	028BY010NV	028BY045NV	028BY011NV	028BY052NV	None
Potential production (lb/acre):								
Favorable years		600	300	800	1000	600	800	
Normal years		450	200	600	800	450	600	
Unfavorable years		250	125	400	600	250	450	

260--DEWAR-CHIARA-HUNNTON ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		DEWAR	CHIARA	HUNNTON	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	---	---	---	---	10-20	---
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	2-5	---	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-25	---	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	25-40	20-40	25-40
muttongrass	POPE	---	---	---	---	---	2-8	---
needleandthread	STCO4	---	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	15-25	---	15-25
black sagebrush	ARARN	---	---	---	---	---	20-30	---
winterfat	EULA5	---	---	---	---	---	2-5	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	025XY019NV	028BY006NV	025XY019NV
Potential production (lb/acre):								
Favorable years		800	800	800	800	800	800	800
Normal years		600	600	600	600	600	600	600
Unfavorable years		400	400	400	400	400	400	400

270--CHIARA-KELK ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		CHIARA	KELK	KELK	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORRY	---	---	---	15-30	---	---
Sandberg bluegrass	POSE	2-5	2-5	---	---	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	---	---	15-25	15-25
basin wildrye	ELCI2	---	---	55-65	2-8	---	---
bluebunch wheatgrass	AGSP	25-40	25-40	---	---	25-40	25-40
bottlebrush squirreltail	SIHY	---	---	---	5-10	---	---
creeping wildrye	ELTR3	---	---	5-15	---	---	---
western wheatgrass	AGSM	---	---	5-15	---	---	---
Wyoming big sagebrush	ARTRW	15-25	15-25	---	15-30	15-25	15-25
antelope bitterbrush	PUTR2	---	---	---	2-8	---	---
basin big sagebrush	ARTRT	---	---	10-15	---	---	---
black greasewood	SAVE4	---	---	2-8	---	---	---
black sagebrush	ARARN	---	---	---	10-20	---	---
spiny hopsage	GRSP	---	---	---	2-5	---	---
Range site number		025XY019NV	025XY019NV	024XY006NV	025XY025NV	025XY019NV	025XY019NV
Potential production (lb/acre):							
Favorable years		800	800	1500	500	800	800
Normal years		600	600	1100	350	600	600
Unfavorable years		400	400	600	200	400	400

273--CHIARA-DEWAR-ENKO ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		CHIARA	DEWAR	ENKO	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	---	---	---	5-15	---
Sandberg bluegrass	POBE	2-5	2-5	2-5	2-5	---	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25	15-30	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40	---	25-40
globemallow	SPHA	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25	---	15-25
black sagebrush	ARARN	---	---	---	---	25-35	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV	024XY030NV	025XY019NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	500	800
Normal years		600	600	600	600	350	600
Unfavorable years		400	400	400	400	250	400

276--CHIARA-PEEKO-URMAPOT ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		CHIARA	PEEKO	URMAPOT	Inclusion 1
Indian ricegrass	ORHY	---	5-15	10-20	20-30
Sandberg bluegrass	POSE	2-5	---	---	2-5
Thurber needlegrass	STTH2	15-25	15-30	---	---
bluebunch wheatgrass	AGSP	25-40	---	20-40	---
bottlebrush squirreltail	SIHY	---	---	---	2-8
muttongrass	FOFE	---	---	2-8	---
needleandthread	STCO4	---	---	2-5	10-20
globemallow	SPHAE	---	2-5	---	---
Wyoming big sagebrush	ARTRW	15-25	---	---	25-35
black sagebrush	ARARN	---	25-35	20-30	---
rabbitbrush	CHRY89	---	---	---	2-5
winterfat	EULAS	---	---	2-5	---
Range site number		025XY019NV	024XY030NV	028BY006NV	028BY010NV
Potential production (lb/acre):					
Favorable years		800	500	800	800
Normal years		600	350	600	600
Unfavorable years		400	250	400	400

279--CHIARA-PARISA-ENKO ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		CHIARA	PARISA	ENKO	Inclusion 1	Inclusion 2
Indian ricegrass	OREY	20-30	20-30	20-30	2-5	20-30
Sandberg bluegrass	POSE	2-5	2-5	2-5	---	2-5
Thurber needlegrass	STH2	---	---	---	30-40	---
bluebunch wheatgrass	AGSP	---	---	---	15-30	---
bluegrass	POA++	---	---	---	2-8	---
bottlebrush squirreltail	SIHY	2-8	2-8	2-8	---	2-8
needleandthread	STCO4	10-20	10-20	10-20	2-8	10-20
arrowleaf balsamroot	BASA3	---	---	---	2-5	---
tapertip hawksbeard	CRAC2	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	25-35	25-35	25-35	---	25-35
antelope bitterbrush	PUTR2	---	---	---	2-10	---
big sagebrush	ARTR2	---	---	---	15-25	---
rabbitbrush	CHRY89	2-5	2-5	2-5	---	2-5
Range site number		028BY010NV	028BY010NV	028BY010NV	028BY007NV	028BY010NV
Potential production (lb/acre):						
Favorable years		800	800	800	1000	800
Normal years		600	600	600	800	600
Unfavorable years		400	400	400	600	400

280--OUPICO-ENKO ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		OUPICO	ENKO	Inclusion 1	Inclusion 2
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	15-25
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	25-40
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-25
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY019NV
Potential production (lb/acre):					
Favorable years		800	800	800	800
Normal years		600	600	600	600
Unfavorable years		400	400	400	400

282--SHABLISS-PYRAT-OKAN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or inclusion number--						
		SHABLISS	PYRAT	OKAN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-30	20-30	20-30	20-35	20-30	20-30	5-10
Sandberg bluegrass	FOSE	2-5	2-5	2-5	2-8	2-5	2-5	---
basin wildrye	ELCI2	---	---	---	---	---	---	10-20
bottlebrush squirreltail	SIHY	2-8	2-8	2-8	2-5	2-8	2-5	---
needleandthread	STCO4	10-20	10-20	10-20	5-15	10-20	10-20	---
thickspike wheatgrass	AGDA	---	---	---	---	---	---	5-10
wyoming big sagebrush	AKTRW	25-35	25-35	25-35	---	25-35	25-35	25-35
black sagebrush	ARARN	---	---	---	25-35	---	---	---
downy rabbitbrush	CHVIP4	---	---	---	2-5	---	---	---
rabbitbrush	CHRY99	2-5	2-5	2-5	---	2-5	---	---
shadscale	ATCO	---	---	---	2-5	---	---	---
Range site number		028BY010NV	028BY010NV	028BY010NV	028BY011NV	028BY010NV	028BY080NV	028BY045NV
Potential production (lb/acre):								
Favorable years		800	800	800	600	800	600	1000
Normal years		600	600	600	450	600	400	800
Unfavorable years		400	400	400	250	400	200	600

310--SONOMA-DEVILSGAIT ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		SONOMA	DEVILSGAIT	SONOMA	Inclusion 1	Inclusion 2	Inclusion 3
Nevada bluegrass	PONB3	---	5-15	---	---	5-15	5-10
alkali bluegrass	POJU	5-15	---	---	---	---	---
alkali cordgrass	SPGR	5-10	---	---	---	---	---
alkali muhly	MUAS	10-20	---	---	---	---	---
alkali sacaton	SPAI	15-40	---	---	5-25	---	---
alpine timothy	PHAL2	---	---	---	---	---	5-10
basin wildrye	ELCI2	2-5	---	55-65	50-60	---	---
creeping wildrye	ELTR3	---	---	5-15	---	---	---
inland saltgrass	DISPS2	5-10	2-5	---	---	2-5	---
mat muhly	MURI	---	2-5	---	---	2-5	---
sedge	CAREX	---	2-10	---	---	2-10	5-10
tufted hairgrass	DSCE	---	---	---	---	---	30-60
western wheatgrass	AGSM	---	---	5-15	---	---	---
wildrye	ELYMU	---	60-80	---	---	60-80	---
Sierra clover	TRWO	---	---	---	---	---	2-5
arrowgrass	TRIGL	1-3	---	---	---	---	---
cinquefoil	POTEN	---	---	---	---	---	2-5
basin big sagebrush	ARTRT	---	---	10-15	---	---	---
black greasewood	SAVE4	---	---	2-8	5-15	---	---
rubber rabbitbrush	CHNA2	---	---	---	2-5	---	---
willow	SALIX	---	5-10	---	---	5-10	---
Range site number		024XY009NV	025XY001NV	024XY006NV	024XY007NV	025XY001NV	025XY005NV
Potential production (lb/acre):							
Favorable years		1500	3500	1500	1900	3500	3000
Normal years		1000	2500	1100	1400	2500	1700
Unfavorable years		700	1800	600	800	1800	1000

311--SONOMA-KELK ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		SONOMA	KELK	Inclusion 1	Inclusion 2
Nevada bluegrass	PONE3	5-10	---	---	5-10
alkali sacaton	SPAI	---	---	5-25	---
basin wildrye	ELCI2	60-70	55-65	50-60	60-70
creeping wildrye	ELTR3	---	5-15	---	---
mat muhly	MURI	2-8	---	---	2-8
streambank wheatgrass	AGDAR	2-8	---	---	2-8
western wheatgrass	AGSM	---	5-15	---	---
basin big sagebrush	ARTRT	5-10	10-15	---	5-10
black greasewood	SAVE4	---	2-8	5-15	---
rubber rabbitbrush	CHNA2	---	---	2-5	---
Range site number		025XY003NV	024XY006NV	024XY007NV	025XY003NV
Potential production (lb/acre):					
Favorable years		4500	1500	1900	4500
Normal years		3500	1100	1400	3500
Unfavorable years		2000	600	800	2000

330--KZIN-HOLBORN ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		KZIN	HOLBORN	KZIN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	X	10-20	X	10-20	---	2-5	2-5
Nevada bluegrass	PONE3	---	---	---	---	5-10	---	---
Thurber needlegrass	STTH2	X	---	X	---	---	10-20	30-40
basin wildrye	ELCI2	X	---	X	---	70-80	---	---
bluebunch wheatgrass	AGSP	X	20-40	X	20-40	---	20-35	15-30
bluegrass	POA++	X	---	X	---	---	---	2-8
bottlebrush squirreltail	SIHY	X	---	X	---	---	---	---
muttongrass	POPE	---	2-8	---	2-8	---	---	---
needleandthread	STCO4	---	2-5	---	2-5	---	---	2-8
arrowleaf balsamroot	BASA3	X	---	X	---	---	---	2-5
tapertip hawksbeard	CRAC2	X	---	X	---	---	---	2-5
Stansbury cliffrose	COMES	X	---	X	---	---	---	---
antelope bitterbrush	PUTR2	X	---	X	---	---	---	2-10
basin big sagebrush	ARTR2	---	---	---	---	5-10	---	---
big sagebrush	ARTR2	---	---	---	---	---	---	15-25
black sagebrush	ARARN	X	20-30	X	20-30	---	25-35	---
curlleaf mountainmahogany	CELE3	X	---	X	---	---	---	---
serviceberry	AMELA	X	---	X	---	---	---	---
winterfat	EULA5	---	2-5	---	2-5	---	---	---
Utah juniper	JUOS	X	---	X	---	---	---	---
singleleaf pinyon	PIMO	X	---	X	---	---	---	---
Range site number		028BY060NV	028BY006NV	028BY060NV	028BY006NV	028BY003NV	024XY031NV	028BY007NV
Potential production (lb/acre):								
Favorable years		500	800	500	800	5000	700	1000
Normal years		300	600	300	600	2500	500	800
Unfavorable years		250	400	250	400	1500	300	600

331--KZIN-COBRE-JACKPOT ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		KZIN	COBRE	JACKPOT	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	X	20-30	15-30	10-20	X	20-35	---
Sandberg bluegrass	POSE	---	2-5	---	---	---	2-8	---
Thurber needlegrass	STTH2	X	---	---	---	X	---	---
basin wildrye	ELCI2	X	---	5-10	---	---	---	---
bluebunch wheatgrass	AGSP	X	---	---	---	X	---	---
bluegrass	POA++	X	---	---	---	X	---	---
bottlebrush squirreltail	SIRY	X	2-8	---	2-5	---	2-5	---
needleandthread	STCO4	---	10-20	30-40	---	---	5-15	---
arrowleaf balsamroot	BASA3	X	---	---	---	---	---	---
globemallow	SPHAE	---	---	---	2-5	---	---	---
goldenweed	HAPLO2	---	---	---	---	X	---	---
phlox	PHLOX	---	---	---	---	X	---	---
tapertip hawksbeard	CRAC2	X	---	---	---	---	---	---
Stansbury cliffrose	COMES	X	---	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	---	---	---
antelope bitterbrush	POTR2	X	---	---	---	---	---	---
big sagebrush	ARTR2	---	---	15-25	---	---	---	---
black sagebrush	ARARN	X	---	---	---	X	25-35	---
curlleaf mountainmahogany	CELE3	X	---	---	---	---	---	---
downy rabbitbrush	CHVIP4	---	---	---	---	X	2-5	---
fourwing saltbush	ATCA2	---	---	---	15-30	---	---	---
rabbitbrush	CRYS9	---	2-5	---	---	---	---	---
serviceberry	AMELA	X	---	---	---	---	---	---
shadscale	ATCO	---	---	---	---	---	2-5	---
spiny hopsage	GRSP	---	---	1-5	10-20	---	---	---
winterfat	EULA5	---	---	---	2-5	---	---	---
Utah juniper	JUOS	X	---	---	---	X	---	---
singleleaf pinyon	PIMO	X	---	---	---	---	---	---
Range site number		028BY060NV	028BY010NV	024XY017NV	028BY078NV	025XY060NV	028BY011NV	None
Potential production (lb/acre):								
Favorable years		500	800	900	600	400	600	
Normal years		300	600	700	500	275	450	
Unfavorable years		250	400	500	400	150	250	

333--KZIN-HOLBORN-ONKEYO ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		KZIN	HOLBORN	ONKEYO	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	X	10-20	15-30	10-20	2-5	2-5
Thurber needlegrass	STTH2	X	---	---	---	10-20	30-40
basin wildrye	ELCI2	X	---	---	---	---	---
bluebunch wheatgrass	AGSP	X	20-40	30-40	20-40	20-35	15-30
bluegrass	POA++	X	---	5-10	---	---	2-8
bottlebrush squirreltail	SIHY	X	---	---	---	---	---
muttongrass	POPE	---	2-8	---	2-8	---	---
needleandthread	STCO4	---	2-5	---	2-5	---	2-8
arrowleaf balsamroot	BASA3	X	---	---	---	---	2-5
tapertip hawksbeard	CRAC2	X	---	---	---	---	2-5
Stansbury cliffrose	COMES	X	---	---	---	---	---
antelope bitterbrush	POTR2	X	---	5-10	---	---	2-10
big sagebrush	ARTR2	---	---	---	---	---	15-25
black sagebrush	ARARN	X	20-30	---	20-30	25-35	---
curlleaf mountainmshogany	CELE3	X	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	15-25	---	---	---
serviceberry	AMELA	X	---	---	---	---	---
winterfat	EULA5	---	2-5	---	2-5	---	---
Utah juniper	JUOS	X	---	---	---	---	---
singleleaf pinyon	PIMO	X	---	---	---	---	---
Range site number		028BY060NV	028BY006NV	028BY079NV	028BY006NV	024XY031NV	028BY007NV
Potential production (lb/acre):							
Favorable years		500	800	700	800	700	1000
Normal years		300	600	500	600	500	800
Unfavorable years		250	400	300	400	300	600

340--SHUTTLE-HARDHAT ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		SHUTTLE	HARDHAT	SHUTTLE	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	40-50	1-5	40-50	15-25	10-20
bottlebrush squirreltail	SIHY	2-5	5-10	2-5	5-10	5-15
other perennial grasses	PPQG	---	---	---	2-5	---
globemallow	SPHAE	---	---	---	2-5	---
bud sagebrush	ARSP5	5-15	---	5-15	2-8	10-25
fourwing saltbush	ATCA2	---	---	---	2-5	---
shadscale	ATCO	---	85-90	---	---	40-50
winterfat	EULA5	20-30	---	20-30	40-50	---
Range site number		028BY084NV	028BY073NV	028BY084NV	028BY013NV	028BY017NV
Potential production (lb/acre):						
Favorable years		900	400	900	700	400
Normal years		700	300	700	500	300
Unfavorable years		400	200	400	350	200

350--JERICHO-JERICHO, SILT LOAM ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		JERICHO	JERICHO	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	20-30	15-25	20-30	40-50	20-30
Sandberg bluegrass	POSE	2-5	---	2-5	---	2-5
bottlebrush squirreltail	SIHY	2-8	2-5	2-8	---	2-8
galleta	HIJA	---	---	---	2-8	---
needleandthread	STCO4	10-20	5-10	10-20	---	10-20
globemallow	SPHAE	---	---	---	2-5	---
scarlet globemallow	SPCO	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	25-35	20-35	25-35	---	25-35
bud sagebrush	ARSP5	---	---	---	2-8	---
rabbitbrush	CHRY99	2-5	---	2-5	---	2-5
shadscale	ATCO	---	2-5	---	1-5	---
spiny hopsage	GRSP	---	5-20	---	---	---
winterfat	EULA5	---	---	---	25-30	---
Range site number		028BY010NV	028BY052NV	028BY010NV	028AY002NV	028BY010NV
Potential production (lb/acre):						
Favorable years		800	800	800	800	800
Normal years		600	600	600	600	600
Unfavorable years		400	450	400	400	400

351--SHABLISS-OKAN-EASTWELL ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		SHABLISS	OKAN	EASTWELL	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORRY	20-30	15-25	20-35	2-10	10-20	40-50
Sandberg bluegrass	POSE	2-5	---	2-8	---	---	---
basin wildrye	ELCI2	---	---	---	10-20	---	---
bottlebrush squirreltail	SIHY	2-8	2-5	2-5	---	5-15	2-5
needleandthread	STCO4	10-20	5-10	5-15	---	---	---
globemallow	SPHAE	---	---	---	---	---	1-5
scarlet globemallow	SPCO	---	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	25-35	20-35	---	---	---	---
big sagebrush	ARTR2	---	---	---	20-30	---	---
black greasewood	SAVE4	---	---	---	30-40	---	---
black sagebrush	ARARN	---	---	25-35	---	---	---
bud sagebrush	ARSP5	---	---	---	---	10-25	---
downy rabbitbrush	CHVIP4	---	---	2-5	---	---	---
rabbitbrush	CHRY59	2-5	---	---	---	---	---
rubber rabbitbrush	CHNA2	---	---	---	2-5	---	---
shadscale	ATCO	---	2-5	2-5	---	40-50	25-35
spiny hopsage	GRSP	---	5-20	---	---	---	---
winterfat	EULAS	---	---	---	---	---	5-10
Range site number		028BY010NV	028BY052NV	028BY011NV	028BY028NV	028BY017NV	028BY075NV
Potential production (lb/acre):							
Favorable years		800	800	600	800	400	700
Normal years		600	600	450	600	300	500
Unfavorable years		400	450	250	400	200	300

355--SHABLISS-OKAN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		SHABLISS	OKAN	OKAN	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	20-30	15-25	20-30	15-25	20-35	10-20
Sandberg bluegrass	POSE	2-5	---	2-5	---	2-8	---
bottlebrush squirreltail	SIHY	2-8	2-5	2-8	5-10	2-5	5-15
needleandthread	STCO4	10-20	5-10	10-20	---	5-15	---
other perennial grasses	PPGG	---	---	---	2-5	---	---
globemallow	SPHA	---	---	---	2-5	---	---
scarlet globemallow	SPCO	---	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	25-35	20-35	25-35	---	---	---
black sagebrush	ARAR	---	---	---	---	25-35	---
bud sagebrush	ARSP5	---	---	---	2-8	---	10-25
downy rabbitbrush	CHVIP4	---	---	---	---	2-5	---
fourwing saltbush	ATCA2	---	---	---	2-5	---	---
rabbitbrush	CHRY89	2-5	---	2-5	---	---	---
shadscale	ATCO	---	2-5	---	---	2-5	40-50
spiny hopsage	GRSP	---	5-20	---	---	---	---
winterfat	EULA5	---	---	---	40-50	---	---
Range site number		028BY010NV	028BY052NV	028BY010NV	028BY013NV	028BY011NV	028BY017NV
Potential production (lb/acre):							
Favorable years		800	800	800	700	600	400
Normal years		600	600	600	500	450	300
Unfavorable years		400	450	400	350	250	200

370--TOANO-TULASE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		TOANO	TULASE	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	OREY	2-8	---	---	15-25	1-5
Sandberg bluegrass	POSE	---	2-5	2-5	---	---
Thurber needlegrass	STTH2	---	15-25	15-25	---	---
bluebunch wheatgrass	AGSP	---	25-40	25-40	---	---
bottlebrush squirreltail	SIHY	2-5	---	---	5-10	5-10
other perennial grasses	PPGG	---	---	---	2-5	---
western wheatgrass	AGSM	5-15	---	---	---	---
globemallow	SPHAE	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	15-25	15-25	---	---
bud sagebrush	ARSP5	---	---	---	2-8	---
fourwing saltbush	ATCA2	---	---	---	2-5	---
shadscale	ATCO	2-5	---	---	---	85-90
sickle saltbush	ATPA	55-65	---	---	---	---
winterfat	EULA5	5-15	---	---	40-50	---
Range site number		028BY047NV	025XY019NV	025XY019NV	028BY013NV	028BY073NV
Potential production (lb/acre):						
Favorable years		500	800	800	700	400
Normal years		350	600	600	500	300
Unfavorable years		200	400	400	350	200

371--LINOYER-OKAN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		LINOYER	OKAN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	15-25	20-30	40-50	20-30	20-35	15-25
Sandberg bluegrass	POSE	---	2-5	---	2-5	2-8	---
bottlebrush squirreltail	SIHY	5-10	2-8	2-5	2-8	2-5	2-5
needleandthread	STCO4	---	10-20	---	10-20	5-15	5-10
other perennial grasses	PFGG	2-5	---	---	---	---	---
globemallow	SPRAE	2-5	---	---	---	---	---
scarlet globemallow	SPCO	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	25-35	---	25-35	---	20-35
black sagebrush	ARARN	---	---	---	---	25-35	---
bud sagebrush	ARSP5	2-8	---	5-15	---	---	---
downy rabbitbrush	CHVIP4	---	---	---	---	2-5	---
fourwing saltbush	ATCA2	2-5	---	---	---	---	---
rabbitbrush	CHRY89	---	2-5	---	2-5	---	---
shadscale	ATCO	---	---	---	---	2-5	2-5
spiny hopsage	GRSP	---	---	---	---	---	5-20
winterfat	EULA5	40-50	---	20-30	---	---	---
Range site number		028BY013NV	028BY010NV	028BY084NV	028BY010NV	028BY011NV	028BY052NV
Potential production (lb/acre):							
Favorable years		700	800	900	800	600	800
Normal years		500	600	700	600	450	600
Unfavorable years		350	400	400	400	250	450

373--TIMPIE-PILTDOWN-LINOYER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		TIMPIE	PILTDOWN	LINOYER	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	40-50	50-70	15-25	---	20-30	1-5	2-10
Sandberg bluegrass	POSE	---	---	---	---	2-5	---	2-5
bottlebrush squirreltail	SIHY	2-5	---	5-10	5-10	2-8	5-10	2-5
galleta	HIJA	---	2-5	---	---	---	---	---
needleandthread	STCO4	---	2-5	---	---	10-20	---	2-10
other perennial grasses	PPGG	---	---	2-5	---	---	---	---
sand dropseed	SPCR	---	5-15	---	---	---	---	---
western wheatgrass	AGSM	---	---	---	2-5	---	---	---
globemallow	SPHAE	1-5	---	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	---	---
black greasewood	SAVE4	---	---	---	15-25	---	---	---
bud sagebrush	ARSP5	---	---	2-8	---	---	---	---
fourwing saltbush	ATCA2	---	15-25	2-5	---	---	---	---
pigmy sagebrush	ARPY2	---	---	---	---	---	---	50-70
rabbitbrush	CHRY89	---	---	---	---	2-5	---	---
shadscale	ATCO	25-35	---	---	2-5	---	85-90	---
sickle saltbush	ATFA	---	---	---	50-60	---	---	---
winterfat	EULA5	5-10	2-8	40-50	---	---	---	---
Range site number		028BY075NV	029XY012NV	028BY013NV	028BY097NV	028BY010NV	028BY073NV	028BY040NV
Potential production (lb/acre):								
Favorable years		700	700	700	500	800	400	250
Normal years		500	500	500	350	600	300	175
Unfavorable years		300	300	350	200	400	200	100

374--HEIST-OKAN-ZERK ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		HEIST	OKAN	ZERK	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	40-50	20-30	40-50	40-50	20-30	1-5
Sandberg bluegrass	POSE	---	2-5	---	---	2-5	---
bottlebrush squirreltail	SIHY	2-5	2-8	2-5	2-5	2-8	5-10
needleandthread	STCO4	---	10-20	---	---	10-20	---
globemallow	SPHAE	---	---	1-5	1-5	---	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	25-35	---
bud sagebrush	ARSP5	5-15	---	---	---	---	---
rabbitbrush	CHRY89	---	2-5	---	---	2-5	---
shadscale	ATCO	---	---	25-35	25-35	---	85-90
winterfat	EULA5	20-30	---	5-10	5-10	---	---
Range site number		028BY084NV	028BY010NV	028BY075NV	028BY075NV	028BY010NV	028BY073NV
Potential production (lb/acre):							
Favorable years		900	800	700	700	800	400
Normal years		700	600	500	500	600	300
Unfavorable years		400	400	300	300	400	200

375--TOANO-HEIST ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		TOANO	HEIST	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	2-8	40-50	15-25	1-5	20-30	2-10
sandberg bluegrass	POSE	---	---	---	---	2-5	---
basin wildrye	ELCI2	---	---	---	---	---	10-20
bottlebrush squirreltail	SIHY	2-5	2-5	5-10	5-10	2-8	---
needleandthread	STCO4	---	---	---	---	10-20	---
other perennial grasses	PPGG	---	---	2-5	---	---	---
western wheatgrass	AQSM	5-15	---	---	---	---	---
globemallow	SPHAE	---	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	---
big sagebrush	ARTR2	---	---	---	---	---	20-30
black greasewood	SAVE4	---	---	---	---	---	30-40
bud sagebrush	ARSP5	---	5-15	2-8	---	---	---
fourwing saltbush	ATCA2	---	---	2-5	---	---	---
rabbitbrush	CHRY89	---	---	---	---	2-5	---
rubber rabbitbrush	CHNA2	---	---	---	---	---	2-5
shadscale	ATCO	2-5	---	---	85-90	---	---
sickle saltbush	ATPA	55-65	---	---	---	---	---
winterfat	EULA5	5-15	20-30	40-50	---	---	---
Range site number		028BY047NV	028BY084NV	028BY013NV	028BY073NV	028BY010NV	028BY028NV
Potential production (lb/acre):							
Favorable years		500	900	700	400	800	800
Normal years		350	700	500	300	600	600
Unfavorable years		200	400	350	200	400	400

380--COBRE-YEAR-JACKPOT ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		COBRE	YEAR	JACKPOT	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORRY	20-30	5-15	15-30	20-30	X	15-30
Sandberg bluegrass	POSE	2-5	---	---	2-5	---	---
Thurber needlegrass	STTH2	---	15-30	---	---	X	---
basin wildrye	ELCI2	---	---	5-10	---	---	2-8
bluebunch wheatgrass	AGSP	---	---	---	---	X	---
bluegrass	FOA++	---	---	---	---	X	---
bottlebrush squirreltail	SIHY	2-8	---	---	2-8	---	5-10
needleandthread	STCO4	10-20	---	30-40	10-20	---	---
globemallow	SPHAE	---	2-5	---	---	---	---
goldenweed	HAPLO2	---	---	---	---	X	---
phlox	PHLOX	---	---	---	---	X	---
Wyoming big sagebrush	ARTRW	25-35	---	---	25-35	---	15-30
antelope bitterbrush	POTR2	---	---	---	---	---	2-8
big sagebrush	ARTR2	---	---	15-25	---	---	---
black sagebrush	ARARN	---	25-35	---	---	X	10-20
downy rabbitbrush	CHVTP4	---	---	---	---	X	---
rabbitbrush	CHRYSP	2-5	---	---	2-5	---	---
spiny hopsage	GRSP	---	---	1-5	---	---	2-5
Utah juniper	JUOS	---	---	---	---	X	---
Range site number		028BY010NV	024XY030NV	024XY017NV	028BY010NV	025XY060NV	025XY025NV
Potential production (lb/acre):							
Favorable years		800	500	900	800	400	500
Normal years		600	350	700	600	275	350
Unfavorable years		400	250	500	400	150	200

381--COBRE-HUNDRAW-JACKPOT ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		COBRE	HUNDRAW	JACKPOT	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORRY	20-30	X	10-20	20-35	15-30	2-5
Sandberg bluegrass	POSE	2-5	---	2-5	2-8	---	---
Thurber needlegrass	STH2	---	X	---	---	---	10-20
basin wildrye	ELCI2	---	---	---	---	2-8	---
bluebunch wheatgrass	AGSP	---	X	---	---	---	20-35
bluegrass	POA++	---	X	---	---	---	---
bottlebrush squirreltail	SIHY	2-8	---	10-20	2-5	5-10	---
needleandthread	STCO4	10-20	---	---	5-15	---	---
desert globemallow	SPAM2	---	---	1-2	---	---	---
goldenweed	HAPLO2	---	X	---	---	---	---
phlox	PHLOX	---	X	---	---	---	---
Wyoming big sagebrush	ARTRW	25-35	---	---	---	15-30	---
antelope bitterbrush	POTR2	---	---	---	---	2-8	---
black sagebrush	ARARN	---	X	---	25-35	10-20	25-35
downy rabbitbrush	CHVIP4	---	X	---	2-5	---	---
rabbitbrush	CHRY99	2-5	---	---	---	---	---
shadscale	ATCO	---	---	45-55	2-5	---	---
spiny hopsage	GRSP	---	---	---	---	2-5	---
Utah juniper	JUOS	---	X	---	---	---	---
Range site number		028BY010NV	025XY060NV	024XY060NV	028BY011NV	025XY025NV	024XY031NV
Potential production (lb/acre):							
Favorable years		800	400	700	600	500	700
Normal years		600	275	500	450	350	500
Unfavorable years		400	150	300	250	200	300

382--COBRE-ENKO ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		COBRE	ENKO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	---	---	X	20-35	X
Sandberg bluegrass	POSE	2-5	2-5	2-5	---	2-8	---
Thurber needlegrass	STTH2	15-25	15-25	15-25	X	---	X
basin wildrye	ELCI2	---	---	---	---	---	X
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	X	---	X
bluegrass	POA++	---	---	---	X	---	X
bottlebrush squirreltail	SIHY	---	---	---	---	2-5	X
needleandthread	STCO4	---	---	---	---	5-15	---
arrowleaf balsamroot	BASA3	---	---	---	---	---	X
goldenweed	HAPLO2	---	---	---	X	---	---
phlox	PHLOX	---	---	---	X	---	---
tapertip hawksbeard	CRAC2	---	---	---	---	---	X
Stansbury cliffrose	COMES	---	---	---	---	---	X
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	---	---	---
antelope bitterbrush	PUTR2	---	---	---	---	---	X
black sagebrush	ARARN	---	---	---	X	25-35	X
curlleaf mountainmahogany	CELE3	---	---	---	---	---	X
downy rabbitbrush	CHVIP4	---	---	---	X	2-5	---
serviceberry	AMELA	---	---	---	---	---	X
shadscale	ATCO	---	---	---	---	2-5	---
Utah juniper	JUOS	---	---	---	X	---	X
singleleaf pinyon	PIMO	---	---	---	---	---	X
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY060NV	028BY011NV	028BY060NV
Potential production (lb/acre):							
Favorable years		800	800	800	400	600	500
Normal years		600	600	600	275	450	300
Unfavorable years		400	400	400	150	250	250

390--HARDOL-MUTRAL-RUBBLE LAND ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or inclusion number--				
		HARDOL	MUTRAL	RUBBLE LAND	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	2-5	---	---	---	---
Letterman needlegrass	STLE4	---	X	---	---	---
Thurber needlegrass	STHE2	5-10	---	---	---	---
bluebunch wheatgrass	AGSP	5-10	X	---	---	60-80
bluegrass	POA++	2-8	---	---	---	---
bottlebrush squirreltail	SIHY	2-5	---	---	---	---
nuttongrass	POFE	---	X	---	---	2-10
sedge	CAREX	---	X	---	---	---
spike-fescue	LEKI2	---	X	---	---	---
creeping barberry	HERE	---	X	---	---	---
goldenweed	HAPLO2	---	X	---	---	2-5
black sagebrush	ARARN	---	---	---	---	25-35
common juniper	JUCO6	---	X	---	---	---
mountain big sagebrush	ARVA2	2-5	X	---	---	---
serviceberry	AMELA	---	X	---	---	---
bristlecone pine	PIAR	---	X	---	---	---
curlleaf mountainmahogany	CELE3	50-70	---	---	---	---
limber pine	PIFL2	---	X	---	---	---
white fir	ABCO	---	X	---	---	---
Range site number		028BY042NV	028BY063NV	None	None	028BY027NV
Potential production (lb/acre):						
Favorable years		3000	800			600
Normal years		2400	500			450
Unfavorable years		1700	300			300

392--HARDOL-MUIRAL-ONKEYO ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		HARDOL	MUIRAL	ONKEYO	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	2-5	---	15-30	---	---
Letterman needlegrass	STLE4	---	X	---	---	---
Thurber needlegrass	STTH2	5-10	---	---	---	---
bluebunch wheatgrass	AGSP	5-10	X	30-40	---	60-80
bluegrass	POA++	2-8	---	5-10	---	---
bottlebrush squirreltail	SIHY	2-5	---	---	---	---
muttongrass	POFE	---	X	---	---	2-10
sedge	CAREX	---	X	---	---	---
spike-fescue	LEKI2	---	X	---	---	---
creeping barberry	BERE	---	X	---	---	---
goldenweed	HAPLO2	---	X	---	---	2-5
antelope bitterbrush	PUTR2	---	---	5-10	---	---
black sagebrush	ARARN	---	---	---	---	25-35
common juniper	JUCO6	---	X	---	---	---
mountain big sagebrush	ARVA2	2-5	X	15-25	---	---
servicberry	AMELA	---	X	---	---	---
bristlecone pine	PIAR	---	X	---	---	---
curlleaf mountainmahogany	CELE3	50-70	---	---	---	---
limber pine	PIFL2	---	X	---	---	---
white fir	ABCO	---	X	---	---	---
Range site number		028BY042NV	028BY063NV	028BY079NV	Nons	028BY027NV
Potential production (lb/acre):						
Favorable years		3000	800	700		600
Normal years		2400	500	500		450
Unfavorable years		1700	300	300		300

400--CLEAVAGE-SUMINE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		CLEAVAGE	CLEAVAGE	SUMINE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	---	---	---	2-5
Idaho fescue	FEID	30-50	5-30	2-5	30-40	---	5-15	2-10
Indian ricegrass	ORRY	---	---	---	---	2-8	---	---
Nevada bluegrass	PONE3	---	---	2-5	2-5	---	---	2-5
Thurber needlegrass	STTH2	---	---	2-8	---	10-20	---	---
basin wildrye	ELCI2	---	---	5-10	2-10	---	---	---
bluebunch wheatgrass	AGSP	15-30	---	50-60	15-30	30-40	2-10	2-5
bluegrass	POA++	2-10	5-15	---	---	---	---	---
mountain brome	BRCA5	---	---	---	---	---	---	5-15
slender wheatgrass	AGTR	---	---	---	---	---	---	5-15
spike-fescue	LEKI2	---	---	---	---	---	---	2-10
arrowleaf balsamroot	BASA3	---	---	---	2-5	---	---	---
goldenweed	HAPLO2	---	2-5	---	---	---	---	---
tapertip hawksbeard	CRAC2	---	---	---	2-5	---	---	---
Utah serviceberry	AMUT	---	---	---	---	---	---	1-5
antelope bitterbrush	PUTR2	2-5	---	2-10	5-10	---	2-8	1-5
black sagebrush	ARARN	---	---	---	---	20-30	---	---
common chokecherry	PRVI	---	---	---	---	---	---	1-5
low sagebrush	ARAR8	15-25	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	5-15	10-20	---	2-5	5-15
sagebrush	ARTEM	---	30-35	---	---	---	---	---
serviceberry	AMELA	---	---	---	---	---	40-50	---
snowberry	SYMPH	---	---	---	---	---	2-8	2-15
Range site number		025XY017NV	025XY024NV	025XY009NV	025XY012NV	025XY057NV	025XY046NV	025XY004NV
Potential production (lb/acre):								
Favorable years		900	400	1300	1400	700	1800	2800
Normal years		700	275	900	1000	500	1300	1800
Unfavorable years		400	150	700	700	300	900	1200

410--JERICO VERY GRAVELLY LOAM, 2 TO 8 PERCENT SLOPES

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		JERICO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-30	15-25	15-25	X	40-50
Sandberg bluegrass	POSE	---	2-5	---	X	---
bluebunch wheatgrass	AGSP	---	2-8	---	---	---
bottlebrush squirreltail	SIRY	---	2-5	2-5	X	---
galleta	HIJA	2-5	2-8	2-5	X	2-8
needleandthread	STCO4	15-25	---	5-10	X	---
sand dropseed	SPCR	2-5	---	---	---	---
threeawn	ARIST	---	---	---	X	---
erigonum	ERIOG	---	---	---	X	---
globemallow	SPHAE	2-5	---	---	---	2-5
goldenweed	HAPLO2	---	---	---	X	---
lupine	LUPIN	---	---	---	X	---
milkvetch	ASTRA	---	---	---	X	---
scarlet globemallow	SPCO	---	---	2-5	---	---
Douglas rabbitbrush	CHVI8	---	---	---	X	---
Utah juniper	JUOS	---	5-15	---	X	---
Wyoming big sagebrush	ARTRW	---	---	25-35	---	---
black sagebrush	ARARN	15-30	40-50	---	---	---
bud sagebrush	ARSP5	---	---	2-5	---	2-8
fourwing saltbush	ATCA2	2-8	---	---	---	---
pigmy sagebrush	ARPY2	---	---	---	X	---
shadscale	ATCO	---	---	2-5	---	1-5
spiny hopsage	GRSP	---	---	5-15	---	---
winterfat	EULAS	2-5	---	---	---	25-30
Utah juniper	JUOS	---	5-15	---	X	---
singleleaf pinyon	PIMO	---	---	---	X	---
Range site number		028AY013NV	028AY027NV	028AY028NV	028AY021NV	028AY002NV
Potential production (lb/acre):						
Favorable years		700	400	900	200	800
Normal years		500	350	700	100	600
Unfavorable years		300	125	400	75	400

411--JERICO-ARMESPA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		JERICO	ARMESPA	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	10-25	10-25	35-45	5-15	15-25	2-10
Sandberg bluegrass	POSE	2-5	2-5	---	---	---	2-8
blue grama	BOGR2	---	---	---	1-5	---	---
bluebunch wheatgrass	AGSP	---	---	---	30-40	---	---
bluegrass	FOA++	---	---	---	2-5	---	---
bottlebrush squirreltail	SIHY	---	---	---	---	2-5	---
galleta	HLJA	2-8	2-8	2-8	---	2-5	1-5
needleandthread	STCO4	2-10	2-10	2-8	2-5	5-10	1-5
sand dropseed	SPCR	---	---	2-5	---	---	---
globemallow	SPHAE	---	---	2-5	---	---	---
scarlet globemallow	SPCO	---	---	---	---	2-5	---
Nevada ephedra	EPNE	---	---	---	---	---	5-10
Stansbury cliffrose	COMES	---	---	---	2-8	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	---
big sagebrush	ARTR2	---	---	---	---	---	30-45
black sagebrush	ARARN	15-30	15-30	---	25-35	---	---
bud sagebrush	ARSP5	---	---	2-10	---	2-5	---
horsebrush	TETRA3	---	---	---	---	---	2-8
other shrubs	SSSS	---	---	---	---	---	5-25
rubber rabbitbrush	CHNA2	---	---	---	---	---	5-20
shadescale	ATCO	2-5	2-5	20-30	---	2-5	---
spiny hopsage	GRSP	---	---	---	---	5-15	2-8
winterfat	EULAS	5-10	5-10	5-15	---	---	---
Range site number		028AY004NV	028AY004NV	028AY018NV	028AY034NV	028AY028NV	028AY038NV
Potential production (lb/acre):							
Favorable years		500	500	700	600	900	1000
Normal years		325	325	500	400	700	700
Unfavorable years		100	100	300	200	400	500

420--PALINOR ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		PALINOR	PALINOR	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-35	20-35	15-25	X	20-30	40-50
Sandberg bluegrass	POSE	2-8	2-8	---	---	2-5	---
basin wildrye	ELCI2	---	---	---	X	---	---
bluegrass	FOA++	---	---	---	X	---	---
bottlebrush squirreltail	SIHY	2-5	2-5	2-5	X	2-8	2-5
needleandthread	STCO4	5-15	5-15	5-10	X	10-20	---
scarlet globemallow	SPCO	---	---	2-5	---	---	---
thickstem wildcabbage	CACR11	---	---	---	X	---	---
Utah juniper	JUOS	---	---	---	X	---	---
Wyoming big sagebrush	ARTRW	---	---	20-35	---	25-35	---
antelope bitterbrush	PUTR2	---	---	---	X	---	---
black sagebrush	ARARN	25-35	25-35	---	X	---	---
bud sagebrush	ARSP5	---	---	---	---	---	5-15
downy rabbitbrush	CHVIP4	2-5	2-5	---	---	---	---
rabbitbrush	CHRY89	---	---	---	---	2-5	---
shadscale	ATCO	2-5	2-5	2-5	---	---	---
spiny hopsage	GRSP	---	---	5-20	---	---	---
winterfat	EULA5	---	---	---	---	---	20-30
Range site number		028BY011NV	028BY011NV	028BY052NV	028BY083NV	028BY010NV	028BY084NV
Potential production (lb/acre):							
Favorable years		600	600	800	300	800	900
Normal years		450	450	600	200	600	700
Unfavorable years		250	250	450	125	400	400

421--PALINOR-AUTOMAL ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		PALINOR	AUTOMAL	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	20-35	20-35	20-30	40-50	15-25
Sandberg bluegrass	POSE	2-8	2-8	2-5	---	---
bottlebrush squirreltail	SIHY	2-5	2-5	2-8	2-5	2-5
needleandthread	STCO4	5-15	5-15	10-20	---	5-10
scarlet globemallow	SPCO	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	25-35	---	20-35
black sagebrush	ARARN	25-35	25-35	---	---	---
bud sagebrush	ARSP5	---	---	---	5-15	---
downy rabbitbrush	CHVIP4	2-5	2-5	---	---	---
rabbitbrush	CHRY89	---	---	2-5	---	---
shadscale	ATCO	2-5	2-5	---	---	2-5
spiny hopsage	GRSP	---	---	---	---	5-20
winterfat	EOLAS	---	---	---	20-30	---
Range site number		028BY011NV	028BY011NV	028BY010NV	028BY084NV	028BY052NV
Potential production (lb/acre):						
Favorable years		600	600	800	900	800
Normal years		450	450	600	700	600
Unfavorable years		250	250	400	400	450

422--PALINOR-ZIMBOB-OKAN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		PALINOR	ZIMBOB	OKAN	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	20-35	10-20	20-30	20-35	15-25	---
Sandberg bluegrass	POSE	2-8	2-5	2-5	2-8	2-5	---
Scribner needlegrass	STSC2	---	---	---	---	2-5	---
bluebunch wheatgrass	AGSF	---	---	---	---	2-5	---
bottlebrush squiireltail	SIHY	2-5	2-5	2-8	2-5	2-5	---
needleandthread	STCO4	5-15	10-20	10-20	5-15	---	---
Wyoming big sagebrush	ARTRW	---	---	25-35	---	---	---
black sagebrush	ARARN	25-35	35-45	---	25-35	30-35	---
downy rabbitbrush	CHVIP4	2-5	---	---	2-5	---	---
rabbitbrush	CHRY89	---	---	2-5	---	---	---
shadscale	ATCO	2-5	2-5	---	2-5	---	---
Range site number		028BY011NV	028BY016NV	028BY010NV	028BY011NV	028BY059NV	None
Potential production (lb/acre):							
Favorable years		600	350	800	600	400	
Normal years		450	225	600	450	350	
Unfavorable years		250	100	400	250	125	

424--PALINOR-HUNDRAW-OKAN ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		PALINOR	HUNDRAW	OKAN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	20-35	X	15-25	10-20	X	20-35	X
Sandberg bluegrass	POSE	2-8	---	---	2-5	---	2-8	---
Thurber needlegrass	STTH2	---	---	---	---	X	---	X
basin wildrye	ELCI2	---	X	---	---	X	---	X
bluebunch wheatgrass	AGSP	---	---	---	---	X	---	X
bluegrass	POA++	---	X	---	---	X	---	X
bottlebrush squirreltail	SIRY	2-5	X	2-5	2-5	X	2-5	X
needleandthread	STCO4	5-15	X	5-10	10-20	---	5-15	---
arrowleaf balsamroot	BASA3	---	---	---	---	X	---	X
scarlet globemallow	SPCO	---	---	2-5	---	---	---	---
tapertip hawksbeard	CRAC2	---	---	---	---	X	---	X
thickstem wildcabbage	CACR11	---	X	---	---	---	---	---
Stansbury Cliffrose	COMES	---	---	---	---	X	---	X
Utah juniper	JUOS	---	X	---	---	X	---	X
Wyoming big sagebrush	ARTRW	---	---	20-35	---	---	---	---
antelope bitterbrush	PTR2	---	X	---	---	X	---	X
black sagebrush	ARARN	25-35	X	---	35-45	X	25-35	X
curlleaf mountainmahogany	CELE3	---	---	---	---	X	---	X
downy rabbitbrush	CHVIP4	2-5	---	---	---	---	2-5	---
serviceberry	AMELA	---	---	---	---	X	---	X
shadscale	ATCO	2-5	---	2-5	2-5	---	2-5	---
spiny hopsage	ORSP	---	---	5-20	---	---	---	---
Utah juniper	JUOS	---	X	---	---	X	---	X
singleleaf pinyon	PIMO	---	---	---	---	X	---	X
Range site number		028BY011NV	028BY083NV	028BY052NV	028BY016NV	028BY060NV	028BY011NV	028BY060NV
Potential production (lb/acre):								
Favorable years		600	300	800	350	500	600	500
Normal years		450	200	600	225	300	450	300
Unfavorable years		250	125	450	100	250	250	250

426--PALINOR-AUTOMAL-WINTERMUTE ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		PALINOR	AUTOMAL	WINTERMUTE	Inclusion 1	Inclusion 2
Indian ricegrass	ORRY	20-35	20-35	40-50	10-20	X
Sandberg bluegrass	POSE	2-8	2-8	---	---	---
Thurber needlegrass	STTH2	---	---	---	---	X
basin wildrye	ELCI2	---	---	---	---	X
bluebunch wheatgrass	AGSP	---	---	---	20-40	X
bluegrass	POA++	---	---	---	---	X
bottlebrush squirreltail	SIRY	2-5	2-5	2-5	---	X
muttongrass	POFE	---	---	---	2-8	---
needleandthread	STCO4	5-15	5-15	---	2-5	---
arrowleaf balsamroot	BASA3	---	---	---	---	X
globemallow	SPHAE	---	---	1-5	---	---
tapertip hawkbeard	CRAC2	---	---	---	---	X
Stansbury cliffrose	COMES	---	---	---	---	X
antelope bitterbrush	PUTR2	---	---	---	---	X
black sagebrush	ARARN	25-35	25-35	---	20-30	X
curlleaf mountainmahogany	CELE3	---	---	---	---	X
downy rabbitbrush	CEVIP4	2-5	2-5	---	---	---
serviceberry	AMELA	---	---	---	---	X
shadscale	ATCO	2-5	2-5	25-35	---	---
winterfat	EULA5	---	---	5-10	2-5	---
Utah juniper	JUOS	---	---	---	---	X
singleleaf pinyon	PIMO	---	---	---	---	X
Range site number		028BY011NV	028BY011NV	028BY075NV	028BY006NV	028BY060NV
Potential production (lb/acre):						
Favorable years		600	600	700	800	500
Normal years		450	450	500	600	300
Unfavorable years		250	250	300	400	250

429--PALINOR-AUTOMAL-PALINOR, ERODED ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or inclusion number--						
		PALINOR	AUTOMAL	PALINOR	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	20-35	20-35	X	10-20	15-25	40-50	5-10
Sandberg bluegrass	POSE	2-8	2-8	---	---	---	---	---
basin wildrye	ELCI2	---	---	X	---	---	---	10-20
bluebunch wheatgrass	AGSP	---	---	---	20-40	---	---	---
bluegrass	POA++	---	---	X	---	---	---	---
bottlebrush squirreltail	SIHY	2-5	2-5	X	---	2-5	2-5	---
muttongrass	POFE	---	---	---	2-8	---	---	---
needleandthread	STCO4	5-15	5-15	X	2-5	5-10	---	---
thickspike wheatgrass	AGDA	---	---	---	---	---	---	5-10
globemallow	SPHAB	---	---	---	---	---	1-5	---
scarlet globemallow	SPCO	---	---	---	---	2-5	---	---
thickstem wildcabbage	CACR11	---	---	X	---	---	---	---
Utah juniper	JUOS	---	---	X	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	20-35	---	25-35
antelope bitterbrush	PUTR2	---	---	X	---	---	---	---
black sagebrush	ARARN	25-35	25-35	X	20-30	---	---	---
downy rabbitbrush	CEVIP4	2-5	2-5	---	---	---	---	---
shadscale	ATCO	2-5	2-5	---	---	2-5	25-35	---
spiny hopsage	GRSP	---	---	---	---	5-20	---	---
winterfat	EULA5	---	---	---	2-5	---	5-10	---
Range site number		028BY011NV	028BY011NV	028BY083NV	028BY006NV	028BY052NV	028BY075NV	028BY045NV
Potential production (lb/acre):								
Favorable years		600	600	300	800	800	700	1000
Normal years		450	450	200	600	600	500	800
Unfavorable years		250	250	125	400	450	300	600

430--GRALEY-FIOCHE-CROPPER ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		GRALEY	FIOCHE	CROPPER	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	FOCA	---	X	X	---	---	---	---
Indian ricegrass	ORHY	---	X	---	---	---	---	---
Sandberg bluegrass	POSE	---	X	X	---	---	---	---
Thurber needlegrass	STTH2	15-30	X	---	---	---	10-20	10-20
basin wildrye	ELCI2	2-8	X	X	---	---	2-10	2-10
bluebunch wheatgrass	AGSP	20-40	X	X	20-30	---	30-40	30-40
bluegrass	POA++	2-5	---	---	2-10	---	2-8	2-8
bottlebrush squirreltail	SIHY	---	X	X	---	---	---	---
muttongrass	POPE	---	---	X	---	---	---	---
arrowleaf balsamroot	BASA3	---	X	X	---	---	---	---
crag aster	ASSC3	2-5	---	---	---	---	---	---
tapertip hawkbeard	CRAC2	2-5	X	X	---	---	---	---
antelope bitterbrush	PUTR2	5-10	X	X	2-5	---	2-10	2-10
curlleaf mountainmahogany	CELE3	---	---	X	---	---	---	---
ephedra	EPHE3	---	X	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	25-35	---	---	---
mountain big sagebrush	ARVA2	15-25	X	X	---	---	15-25	15-25
serviceberry	AMELA	---	X	X	---	---	---	---
snowberry	SYMPH	---	---	X	---	---	---	---
Utah juniper	JUOS	---	X	X	---	---	---	---
singleleaf pinyon	PIMO	---	X	X	---	---	---	---
Range site number		028BY087NV	028BY062NV	028BY058NV	028BY037NV	None	028BY030NV	028BY036NV
Potential production (lb/acre):								
Favorable years		900	700	500	800		1500	1500
Normal years		700	500	300	600		1200	1200
Unfavorable years		450	300	200	400		900	900

431--GRALEY-CHEN-MCIVEY ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		GRALEY	CHEN	MCIVEY	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	2-5	---	---	---
Idaho fescue	FEID	30-40	30-50	30-40	2-10	---	X	---
Nevada bluegrass	PONE3	2-5	---	2-5	2-5	5-10	---	---
alpine timothy	PHAL2	---	---	---	---	5-10	---	---
basin wildrye	ELCI2	2-10	---	2-10	---	---	---	---
bluebunch wheatgrass	AGSP	15-30	15-30	15-30	2-5	---	---	---
bluegrass	POA++	---	2-10	---	---	---	---	---
horsemint giant hyssop	AGUR	---	---	---	---	---	X	---
mountain brome	BRCA5	---	---	---	5-15	---	X	---
sedge	CAREX	---	---	---	---	5-10	---	---
slender wheatgrass	AGTR	---	---	---	5-15	---	X	---
spike-fescue	LEKI2	---	---	---	2-10	---	---	---
tufted hairgrass	DecE	---	---	---	---	30-60	---	---
Sierra clover	TRWO	---	---	---	---	2-5	---	---
arrowleaf balsamroot	BASA3	2-5	---	2-5	---	---	---	---
cinquefoil	POTEN	---	---	---	---	2-5	---	---
groundsel	SENEC	---	---	---	---	---	X	---
tapertip hawkbeard	CRAC2	2-5	---	2-5	---	---	---	---
Utah serviceberry	AMUT	---	---	---	1-5	---	X	---
antelope bitterbrush	POTR2	5-10	2-5	5-10	1-5	---	---	---
common chokecherry	PRVI	---	---	---	1-5	---	---	---
low sagebrush	ARAR8	---	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	10-20	---	10-20	5-15	---	---	---
snowberry	SYMPH	---	---	---	2-15	---	X	---
quaking aspen	POTRT	---	---	---	---	---	X	---
Range site number		025XY012NV	025XY017NV	025XY012NV	025XY004NV	025XY005NV	025XY065NV	None
Potential production (lb/acre):								
Favorable years		1400	900	1400	2800	3000	800	
Normal years		1000	700	1000	1800	1700	600	
Unfavorable years		700	400	700	1200	1000	400	

440--LOMOINE-BIJORJA ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		LOMOINE	BIJORJA	LOMOINE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-30	20-30	10-25	X	10-20	---	15-25
Sandberg bluegrass	POSE	---	2-5	2-5	---	---	---	---
Thurber needlegrass	STPH2	---	---	---	X	---	---	---
basin wildrye	ELCI2	---	---	---	X	---	---	---
bluebunch wheatgrass	AGSP	---	---	---	X	20-40	---	---
bluegrass	POA++	---	---	---	X	---	---	---
bottlebrush squirreltail	SIHY	---	2-8	---	X	---	---	2-5
galleta	HIJA	2-5	---	2-8	---	---	---	---
muttongrass	POSE	---	---	---	---	2-8	---	---
needleandthread	STCO4	15-25	10-20	2-10	---	2-5	---	5-10
sand dropseed	SPCR	2-5	---	---	---	---	---	---
arrowleaf balsamroot	BASA3	---	---	---	X	---	---	---
globemallow	SPHAE	2-5	---	---	---	---	---	---
scarlet globemallow	SPCO	---	---	---	---	---	---	2-5
tapertip hawkbeard	CRAC2	---	---	---	X	---	---	---
Stansbury cliffrose	COMES	---	---	---	X	---	---	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	---	---	20-35
antelope bitterbrush	PUTR2	---	---	---	X	---	---	---
black sagebrush	ARARN	15-30	---	15-30	X	20-30	---	---
curlleaf mountainmahogany	CELE3	---	---	---	X	---	---	---
fourwing saltbush	ATCA2	2-8	---	---	---	---	---	---
rabbithrush	CHRY89	---	2-5	---	---	---	---	---
serviceberry	AMELA	---	---	---	X	---	---	---
shadscale	ATCO	---	---	2-5	---	---	---	2-5
spiny hopsage	GRSP	---	---	---	---	---	---	5-20
winterfat	BULA5	2-5	---	5-10	---	2-5	---	---
Utah juniper	JUOS	---	---	---	X	---	---	---
singleleaf pinyon	PIMO	---	---	---	X	---	---	---
Range site number		028AY013NV	028BY010NV	028AY004NV	028BY060NV	028BY006NV	None	028BY052NV
Potential production (lb/acre):								
Favorable years		700	800	500	500	800		800
Normal years		500	600	325	300	600		600
Unfavorable years		300	400	100	250	400		450

460--OKAN-AUTOMAL-HUNDRAW ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		OKAN	AUTOMAL	HUNDRAW	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	20-30	20-35	20-35	20-35	15-25
Sandberg bluegrass	POSE	2-5	2-8	2-8	2-8	---
bottlebrush squirreltail	SINY	2-8	2-5	2-5	2-5	2-5
needleandthread	STCO4	10-20	5-15	5-15	5-15	5-10
scarlet globemallow	SFCO	---	---	---	---	2-5
Wyoming big sagebrush	AKTRW	25-35	---	---	---	20-35
black sagebrush	AKARN	---	25-35	25-35	25-35	---
downy rabbitbrush	CEVIP4	---	2-5	2-5	2-5	---
rabbitbrush	CHRY89	2-5	---	---	---	---
shadscale	ATCO	---	2-5	2-5	2-5	2-5
spiny hopsage	GRSP	---	---	---	---	5-20
Range site number		028BY010NV	028BY011NV	028BY011NV	028BY011NV	028BY052NV
Potential production (lb/acre):						
Favorable years		800	600	600	600	800
Normal years		600	450	450	450	600
Unfavorable years		400	250	250	250	450

470--ROZARA-CUCAMUNGO-ROCK OUTCROP ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		ROZARA	CUCAMUNGO	ROCK OUTCROP	Inclusion 1	Inclusion 2	Inclusion 3
Columbia needlegrass	STNE3	---	---	---	---	2-5	5-10
Idaho fescue	FEID	15-25	X	---	---	2-10	2-5
Nevada bluegrass	PONE3	---	X	---	---	2-5	---
arrowleaf balsamroot	BASA3	---	X	---	---	---	---
basin wildrye	ELCI2	---	X	---	---	---	---
bluebunch wheatgrass	AGSF	5-15	X	---	20-30	2-5	---
bluegrass	POA++	2-5	---	---	2-10	---	2-5
mountain brome	BRCA5	---	---	---	---	5-15	2-5
needlegrass	STIPA	2-8	---	---	---	---	---
slender wheatgrass	AGTR	---	---	---	---	5-15	2-5
spike-fescue	LEKI2	---	---	---	---	2-10	---
tapertip hawkbeard	CRAC2	---	X	---	---	---	---
Utah serviceberry	AMUT	---	X	---	---	1-5	---
antelope bitterbrush	POTR2	2-5	X	---	2-5	1-5	---
common chokecherry	PRVI	---	---	---	---	1-5	---
curlleaf mountainmahogany	CELE3	---	X	---	---	---	50-70
low sagebrush	ARAR8	---	---	---	25-35	---	---
mountain big sagebrush	ARVA2	5-15	X	---	---	5-15	---
mountain snowberry	SYOR2	---	---	---	---	---	2-5
snowberry	SYMPH	2-8	X	---	---	2-15	---
singleleaf pinyon	PIMO	---	X	---	---	---	---
Range site number		025XY071NV	025XY061NV	None	028BY037NV	025XY004NV	025XY030NV
Potential production (lb/acre):							
Favorable years		1700	500		800	2800	3000
Normal years		1300	375		600	1800	2400
Unfavorable years		900	250		400	1200	1700

471--CUCAMUNGO-HENDAP-ROCK OUTCROP ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		CUCAMUNGO	HENDAP	ROCK OUTCROP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	X	---	---	---	---	---	---
Indian ricegrass	ORRY	---	X	---	2-5	---	10-20	15-25
Sandberg bluegrass	POSE	X	---	---	---	---	---	---
Thurber needlegrass	STTH2	---	X	---	30-40	---	---	---
basin wildrye	ELCI2	X	X	---	---	2-8	---	---
bluebunch wheatgrass	AGSP	X	X	---	15-30	30-40	20-40	---
bluegrass	POA++	---	X	---	2-8	2-8	2-5	---
bottlebrush squizreiltail	SIHY	X	X	---	---	---	---	2-5
muttongrass	POFE	X	---	---	---	---	---	---
needleandthread	STCO4	---	---	---	2-8	---	2-5	5-10
needlegrass	STIPA	---	---	---	---	5-15	---	---
arrowleaf balsamroot	BASA3	X	X	---	2-5	2-5	---	---
goldenweed	HAPLO2	---	---	---	---	---	2-5	---
scarlet globemallow	SFCO	---	---	---	---	---	---	2-5
tapertip hawkbeard	CRAC2	X	X	---	2-5	2-5	2-5	---
Stansbury cliffrose	COMES	---	X	---	---	---	---	---
Utah serviceberry	AMUT	---	---	---	---	2-8	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	20-35
antelope bitterbrush	PUTR2	X	X	---	2-10	2-8	---	---
big sagebrush	ARTR2	---	---	---	15-25	---	---	---
black sagebrush	ARARN	---	X	---	---	---	25-35	---
curlleaf mountainmahogany	CELE3	X	X	---	---	---	---	---
mountain big sagebrush	ARVA2	X	---	---	---	10-20	---	---
serviceberry	AMELA	X	X	---	---	---	---	---
shadscale	ATCO	---	---	---	---	---	2-5	2-5
snowberry	SYMPH	X	---	---	---	2-8	---	---
spiny hopsage	GRSP	---	---	---	---	---	---	5-20
winterfat	EULA5	---	---	---	---	---	2-5	---
Utah juniper	JUOS	X	X	---	---	---	---	---
singleleaf pinyon	PINO	X	X	---	---	---	---	---
Range site number		028BY058NV	028BY060NV	None	028BY007NV	028BY015NV	028BY008NV	028BY052NV
Potential production (lb/acre):								
Favorable years		500	500		1000	1500	600	800
Normal years		300	300		800	1100	400	600
Unfavorable years		200	250		600	700	200	450

480--SHABLISS-PALINOR ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		SHABLISS	PALINOR	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-30	20-35	15-25	15-25	20-30	15-25
Sandberg bluegrass	POSE	2-5	2-8	---	---	2-5	---
bottlebrush squirreltail	SIHY	2-5	2-5	2-5	5-10	2-8	2-5
needleandthread	STCO4	10-20	5-15	5-10	---	10-20	5-10
other perennial grasses	PPQG	---	---	---	2-5	---	---
globemallow	SPHAE	---	---	---	2-5	---	---
scarlet globemallow	SPCO	---	---	2-5	---	---	2-5
Wyoming big sagebrush	ARTRW	25-35	---	20-35	---	25-35	20-35
black sagebrush	ARARN	---	25-35	---	---	---	---
bud sagebrush	ARSP5	---	---	---	2-8	---	---
downy rabbitbrush	CHVIP4	---	2-5	---	---	---	---
fourwing saltbush	ATCA2	---	---	---	2-5	---	---
rabbitbrush	CHRY89	---	---	---	---	2-5	---
shadscale	ATCO	---	2-5	2-5	---	---	2-5
spiny hopsage	GRSP	---	---	5-20	---	---	5-20
winterfat	EULA5	---	---	---	40-50	---	---
Range site number		028BY080NV	028BY011NV	028BY052NV	028BY013NV	028BY010NV	028BY052NV
Potential production (lb/acre):							
Favorable years		600	600	800	700	800	800
Normal years		400	450	600	500	600	600
Unfavorable years		200	250	450	350	400	450

485--SHABLISS-PARISA-HUNNTON ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		SHABLISS	PARISA	HUNNTON	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	20-30	20-30	20-30	20-30	5-10
Sandberg bluegrass	POSE	2-5	2-5	2-5	2-5	---
basin wildrye	ELCI2	---	---	---	---	10-20
bottlebrush squirreltail	SIHY	2-8	2-8	2-8	2-8	---
needleandthread	STCO4	10-20	10-20	10-20	10-20	---
thickspike wheatgrass	AGDA	---	---	---	---	5-10
Wyoming big sagebrush	ARTRW	25-35	25-35	25-35	25-35	25-35
rabbitbrush	CHRS9	2-5	2-5	2-5	2-5	---
Range site number		028BY010NV	028BY010NV	028BY010NV	028BY010NV	028BY045NV
Potential production (lb/acre):						
Favorable years		800	800	800	800	1000
Normal years		600	600	600	600	800
Unfavorable years		400	400	400	400	600

490--WINTERMUTE-AUTOMAL ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		WINTERMUTE	AUTOMAL	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	40-50	20-35	20-30	2-10	20-30	40-50
Sandberg bluegrass	POSE	---	2-8	2-5	---	2-5	---
basin wildrye	ELCI2	---	---	---	10-20	---	---
bottlebrush squirreltail	SIRY	2-5	2-5	2-8	---	2-8	2-5
needleandthread	STCO4	---	5-15	10-20	---	10-20	---
globemallow	SPHAE	1-5	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	25-35	---	25-35	---
big sagebrush	ARTR2	---	---	---	20-30	---	---
black greasewood	SAVE4	---	---	---	30-40	---	---
black sagebrush	ARARN	---	25-35	---	---	---	---
bud sagebrush	ARSP5	---	---	---	---	---	5-15
downy rabbitbrush	CHVIP4	---	2-5	---	---	---	---
rabbitbrush	CHRY89	---	---	2-5	---	2-5	---
rubber rabbitbrush	CHNA2	---	---	---	2-5	---	---
shadscale	ATCO	25-35	2-5	---	---	---	---
winterfat	EULAS	5-10	---	---	---	---	20-30
Range site number		028BY075NV	028BY011NV	028BY010NV	028BY028NV	028BY010NV	028BY084NV
Potential production (lb/acre):							
Favorable years		700	600	800	800	800	900
Normal years		500	450	600	600	600	700
Unfavorable years		300	250	400	400	400	400

492--WINTERMUTE-PEEKO-HUNDRAW ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		WINTERMUTE	PEEKO	HUNDRAW	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	40-50	20-35	10-20	X	15-25	20-30
Sandberg bluegrass	POSE	---	2-8	2-5	---	---	2-5
basin wildrye	ELCI2	---	---	---	X	---	---
bluegrass	POA++	---	---	---	X	---	---
bottlebrush squirreltail	SIRY	2-5	2-5	2-5	X	2-5	2-8
needleandthread	STCO4	---	5-15	10-20	X	5-10	10-20
globemallow	SPHAE	1-5	---	---	---	---	---
scarlet globemallow	SPCO	---	---	---	---	2-5	---
thickstem wildcabbage	CACR11	---	---	---	X	---	---
Utah juniper	JUC8	---	---	---	X	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	20-35	25-35
antelope bitterbrush	POTR2	---	---	---	X	---	---
black sagebrush	ARARN	---	25-35	35-45	X	---	---
downy rabbitbrush	CHVIP4	---	2-5	---	---	---	---
rabbitbrush	CHRYB9	---	---	---	---	---	2-5
shadscale	ATCO	25-35	2-5	2-5	---	2-5	---
spiny hopsage	GRSP	---	---	---	---	5-20	---
winterfat	BULA5	5-10	---	---	---	---	---
Range site number		028BY075NV	028BY011NV	028BY016NV	028BY083NV	028BY052NV	028BY010NV
Potential production (lb/acre):							
Favorable years		700	600	350	300	800	800
Normal years		500	450	225	200	600	600
Unfavorable years		300	250	100	125	450	400

494--WINTERMUTE-PYRAT-AUTOMAL ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or inclusion number--					
		WINTERMUTE	PYRAT	AUTOMAL	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	40-50	20-30	20-35	15-25	10-20	20-35
Sandberg bluegrass	POSE	---	2-5	2-8	---	2-5	2-8
bottlebrush squirreltail	SIHY	2-5	2-8	2-5	2-5	2-5	2-5
needleandthread	STCO4	---	10-20	5-15	5-10	10-20	5-15
globemallow	SPHAE	1-5	---	---	---	---	---
scarlet globemallow	SPCO	---	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	25-35	---	20-35	---	---
black sagebrush	ARARN	---	---	25-35	---	35-45	25-35
downy rabbitbrush	CEVIP4	---	---	2-5	---	---	2-5
rabbitbrush	CHRY99	---	2-5	---	---	---	---
shadscale	ATCO	25-35	---	2-5	2-5	2-5	2-5
spiny hopsage	GRSP	---	---	---	5-20	---	---
winterfat	EULAS	5-10	---	---	---	---	---
Range site number		028BY075NV	028BY010NV	028BY011NV	028BY052NV	028BY016NV	028BY011NV
Potential production (lb/acre):							
Favorable years		700	800	600	800	350	600
Normal years		500	600	450	600	225	450
Unfavorable years		300	400	250	450	100	250

496--SODHOUSE-LINOYER ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		SODHOUSE	SODHOUSE	LINOYER	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	OREY	40-50	---	40-50	20-30	20-35	20-30
Sandberg bluegrass	POSE	---	---	---	2-5	2-8	2-5
blue grama	BOGR2	---	X	---	---	---	---
bluebunch wheatgrass	AGSP	---	X	---	---	---	---
bluegrass	POA++	---	X	---	---	---	---
bottlebrush squirreltail	SIHY	2-5	X	2-5	2-8	2-5	2-8
muttongrass	POPE	---	X	---	---	---	---
needleandthread	STCO4	---	---	---	10-20	5-15	10-20
penstemon	PENST	---	X	---	---	---	---
phlox	PELOX	---	X	---	---	---	---
Douglas rabbitbrush	CHV18	---	X	---	---	---	---
Utah serviceberry	AMUT	---	X	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	25-35
black sagebrush	ARARN	---	---	---	---	25-35	---
bud sagebrush	ARSP5	5-15	---	5-15	---	---	---
curlleaf mountainmahogany	CHLE3	---	X	---	---	---	---
downy rabbitbrush	CHV1P4	---	---	---	---	2-5	---
green sphedra	EPVI	---	X	---	---	---	---
greenleaf manzanita	ARPA6	---	X	---	---	---	---
low sagebrush	ARAR8	---	X	---	---	---	---
rabbitbrush	CHRY89	---	---	---	2-5	---	2-5
shadscale	ATCO	---	---	---	---	2-5	---
winterfat	EULAS	20-30	---	20-30	---	---	---
Utah juniper	JUOS	---	X	---	---	---	---
singleleaf pinyon	PIMO	---	X	---	---	---	---
white fir	ABCO	---	X	---	---	---	---
Range site number		028BY084NV	028AY075NV	028BY084NV	028BY010NV	028BY011NV	028BY010NV
Potential production (lb/acre):							
Favorable years		900	500	900	800	600	800
Normal years		700	300	700	600	450	600
Unfavorable years		400	150	400	400	250	400

497--SODHOUSE-PALINOR ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		SODHOUSE	SODHOUSE	PALINOR	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	40-50	---	20-35	20-30	15-25	X	5-10
Sandberg bluegrass	POSE	---	---	2-8	2-5	---	---	---
basin wildrye	ELCY2	---	---	---	---	---	X	10-20
blue grama	BOGR2	---	X	---	---	---	---	---
bluebunch wheatgrass	AGSP	---	X	---	---	---	---	---
bluegrass	POA++	---	X	---	---	---	X	---
bottlebrush squirreltail	SIHY	2-5	X	2-5	2-8	5-10	X	---
muttongrass	POSE	---	X	---	---	---	---	---
needleandthread	STCO4	---	---	5-15	10-20	---	X	---
other perennial grasses	PPGG	---	---	---	---	2-5	---	---
thickspike wheatgrass	AGDA	---	---	---	---	---	---	5-10
globemallow	SPHAE	---	---	---	---	2-5	---	---
penstemon	PENST	---	X	---	---	---	---	---
phlox	PHLOX	---	X	---	---	---	---	---
thickstem wildcabbage	CACR11	---	---	---	---	---	X	---
Douglas rabbitbrush	CHVI8	---	X	---	---	---	---	---
Utah juniper	JUOS	---	X	---	---	---	X	---
Utah serviceberry	AMUT	---	X	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	---	25-35
antelope bitterbrush	POTR2	---	---	---	---	---	X	---
black sagebrush	ARARN	---	---	25-35	---	---	X	---
bud sagebrush	ARSP5	5-15	---	---	---	2-8	---	---
curlleaf mountainmahogany	CELE3	---	X	---	---	---	---	---
downy rabbitbrush	CHVIP4	---	---	2-5	---	---	---	---
fourwing saltbush	ATCA2	---	---	---	---	2-5	---	---
green ephedra	EPVI	---	X	---	---	---	---	---
greenleaf manzanita	ARPA6	---	X	---	---	---	---	---
low sagebrush	ARAR8	---	X	---	---	---	---	---
rabbitbrush	CHRY89	---	---	---	2-5	---	---	---
shadscale	ATCO	---	---	2-5	---	---	---	---
winterfat	EULA5	20-30	---	---	---	40-50	---	---
Utah juniper	JUOS	---	X	---	---	---	X	---
singleleaf pinyon	PIMO	---	X	---	---	---	---	---
white fir	ABCO	---	X	---	---	---	---	---

Range site number	028BY084NV	028AY075NV	028BY011NV	028BY010NV	028BY013NV	028BY083NV	028BY045NV
Potential production (lb/acre):							
Favorable years	900	500	600	800	700	300	1000
Normal years	700	300	450	600	500	200	800
Unfavorable years	400	150	250	400	350	125	600

501--PHARO-IZAR-OKAN ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		PHARO	IZAR	OKAN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	10-20	10-20	15-25	10-20	X	20-35	20-35
Sandberg bluegrass	POSE	---	2-5	---	---	---	2-8	2-8
Thurber needlegrass	STTH2	---	---	---	---	X	---	---
basin wildrye	ELCI2	---	---	---	---	X	---	---
bluebunch wheatgrass	AGSP	20-40	---	---	20-40	X	---	---
bluegrass	POA++	---	---	---	---	X	---	---
bottlebrush squirreltail	SIHY	---	2-5	2-5	---	X	2-5	2-5
nuttongrass	POFE	2-8	---	---	2-8	---	---	---
needleandthread	STCO4	2-5	10-20	5-10	2-5	---	5-15	5-15
arrowleaf balsamroot	BASA3	---	---	---	---	X	---	---
scarlet globemallow	SFCO	---	---	2-5	---	---	---	---
tapertip hawkbeard	CRAC2	---	---	---	---	X	---	---
Stansbury cliffrose	COMES	---	---	---	---	X	---	---
Wyoming big sagebrush	ARTRW	---	---	20-35	---	---	---	---
antelope bitterbrush	PUTR2	---	---	---	---	X	---	---
black sagebrush	ARARN	20-30	35-45	---	20-30	X	25-35	25-35
curlleaf mountainmahogany	CELE3	---	---	---	---	X	---	---
downy rabbitbrush	CHVIP4	---	---	---	---	---	2-5	2-5
serviceberry	AMELA	---	---	---	---	X	---	---
shadscale	ATCO	---	2-5	2-5	---	---	2-5	2-5
spiny hopsage	GRSP	---	---	5-20	---	---	---	---
winterfat	EULA5	2-5	---	---	2-5	---	---	---
Utah juniper	JUOS	---	---	---	---	X	---	---
singleleaf pinyon	PIMO	---	---	---	---	X	---	---
Range site number		028BY006NV	028BY016NV	028BY052NV	028BY006NV	028BY060NV	028BY011NV	028BY011NV
Potential production (lb/acre):								
Favorable years		800	350	800	800	500	600	600
Normal years		600	225	600	600	300	450	450
Unfavorable years		400	100	450	400	250	250	250

503--AUTOMAL-OKAN-WINTERMUTE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		AUTOMAL	OKAN	WINTERMUTE	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	20-35	20-30	40-50	15-25	20-35	20-35
Sandberg bluegrass	POSE	2-8	2-5	---	---	2-8	2-8
bottlebrush squirreltail	SIBY	2-5	2-8	2-5	5-10	2-5	2-5
needleandthread	STCO4	5-15	10-20	---	---	5-15	5-15
other perennial grasses	PPGG	---	---	---	2-5	---	---
globemallow	SPHAE	---	---	1-5	2-5	---	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	---	---
black sagebrush	ARARN	25-35	---	---	---	25-35	25-35
bud sagebrush	ARSP5	---	---	---	2-8	---	---
downy rabbitbrush	CHVIP4	2-5	---	---	---	2-5	2-5
fourwing saltbush	ATCA2	---	---	---	2-5	---	---
rabbitbrush	CHRY89	---	2-5	---	---	---	---
shadscale	ATCO	2-5	---	25-35	---	2-5	2-5
winterfat	EULA5	---	---	5-10	40-50	---	---
Range site number		028BY011NV	028BY010NV	028BY075NV	028BY013NV	028BY011NV	028BY011NV
Potential production (lb/acre):							
Favorable years		600	800	700	700	600	600
Normal years		450	600	500	500	450	450
Unfavorable years		250	400	300	350	250	250

504--AUTOMAL-WINTERMUTE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		AUTOMAL	WINTERMUTE	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	20-35	40-50	40-50	10-20	15-25
Sandberg bluegrass	POSE	2-8	---	---	---	---
bluebunch wheatgrass	AGSP	---	---	---	20-40	---
bottlebrush squirreltail	SIRY	2-5	2-5	2-5	---	2-5
muttongrass	POPE	---	---	---	2-8	---
needleandthread	STCO4	5-15	---	---	2-5	5-10
globemallow	SPHAE	---	1-5	---	---	---
scarlet globemallow	SPCO	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	---	---	20-35
black sagebrush	ARARN	25-35	---	---	20-30	---
bud sagebrush	ARSP5	---	---	5-15	---	---
downy rabbitbrush	CHVIP4	2-5	---	---	---	---
shadscale	ATCO	2-5	25-35	---	---	2-5
spiny hopsage	GRSP	---	---	---	---	5-20
winterfat	EULAS	---	5-10	20-30	2-5	---
Range site number		028BY011NV	028BY075NV	028BY084NV	028BY006NV	028BY052NV
Potential production (lb/acre):						
Favorable years		600	700	900	800	800
Normal years		450	500	700	600	600
Unfavorable years		250	300	400	400	450

510--ADOBE-HAUNCHEE-HARDZEM ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		ADOBE	HARDZEM	HAUNCHEE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	5-15	---	---	---
Columbia needlegrass	STNE3	---	---	---	---	---	X	---
Indian ricegrass	ORHY	---	---	---	---	X	---	---
Letterman needlegrass	STLE4	---	X	---	---	---	X	---
Thurber needlegrass	STTH2	---	---	---	---	X	---	---
basin wildrye	ELCI2	---	---	---	---	X	---	---
bluebunch wheatgrass	AGSP	60-80	X	20-30	60-80	X	---	30-45
bluegrass	POA++	---	---	---	---	X	---	---
bottlebrush squirreltail	SIBY	---	---	---	---	X	---	---
mountain brome	BRCA5	---	---	---	---	---	X	---
muttongrass	POPE	2-10	X	2-8	---	---	---	5-10
needlegrass	STIPA	---	---	5-15	---	---	---	---
pine needlegrass	STPI2	---	---	---	---	---	---	2-8
pinegrass	CARU	---	---	---	---	---	X	---
sedge	CAREX	---	X	---	---	---	---	---
slender wheatgrass	AGTR	---	---	---	---	---	X	---
spike-fescue	LEKI2	---	X	---	1-10	---	---	---
Fendler meadowrue	TSPE	---	---	---	---	---	X	---
arrowleaf balsamroot	BASA3	---	---	---	---	X	---	---
creeping barberry	BERE	---	X	---	---	---	---	---
dandelion	TARAX	---	---	---	---	---	X	---
fleabane	ERIGE2	---	---	---	---	---	X	---
goldenweed	HAPLO2	2-5	X	---	---	---	---	2-8
milkvetch	ASTRA	---	---	---	---	---	X	---
penstemon	PENST	---	---	---	---	---	X	---
starwort	STELL	---	---	---	---	---	X	---
tapertip hawkbeard	CRAC2	---	---	---	---	X	---	---
Douglas rabbitbrush	CEVI8	---	---	---	---	---	---	2-5
Stansbury cliffrose	COMES	---	---	---	---	X	---	---
antelope bitterbrush	PUTR2	---	---	---	---	X	---	---
black sagebrush	ARARN	25-35	---	---	---	X	---	35-45
common juniper	JUCO6	---	X	---	---	---	---	---
curlleaf mountainmahogany	CELE3	---	---	15-25	---	X	---	---
mountain big sagebrush	ARVA2	---	X	15-25	10-20	---	---	---
mountain gooseberry	RIMO2	---	---	---	---	---	X	---
serviceberry	AMELA	---	X	---	---	X	---	---
snowberry	SYMPH	---	---	2-8	2-8	---	X	---
western raspberry	RULE	---	---	---	---	---	X	---
Engelmann spruce	PIEN	---	---	---	---	---	X	---
Utah juniper	JUOS	---	---	---	---	X	---	---
bristlecone pine	PIAR	---	X	---	---	---	---	---
curlleaf mountainmahogany	CELE3	---	---	15-25	---	X	---	---
limber pine	PIFL2	---	X	---	---	---	---	---
quaking aspen	POTRT	---	---	---	---	---	X	---
singleleaf pinyon	PIMO	---	---	---	---	X	---	---
white fir	ABCO	---	X	---	---	---	X	---
Range site number		028BY027NV	028BY063NV	028BY043NV	028BY070NV	028BY060NV	028BY072NV	028BY048NV
Potential production (lb/acre):								
Favorable years		600	800	1700	1100	500	400	350
Normal years		450	500	1300	900	300	250	200
Unfavorable years		300	300	900	600	250	100	100

511--ADOBE-WARDBAY-HARDOL ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or inclusion number--					
		ADOBE	WARDBAY	HARDOL	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	5-15	---	---	---	---
Indian ricegrass	ORRY	---	---	---	---	X	---
Thurber needlegrass	STTB2	---	---	---	---	X	---
basin wildrye	ELCI2	---	---	---	---	X	---
bluebunch wheatgrass	AGSP	30-45	60-80	15-30	---	X	20-30
bluegrass	POA++	---	---	---	---	X	---
bottlebrush squirreltail	SIHY	---	---	---	---	X	---
mountain brome	BRCA5	---	---	5-10	---	---	---
muttongrass	POPE	5-10	---	---	---	---	2-8
needlegrass	STIPA	---	---	15-30	---	---	5-15
pine needlegrass	STPI2	2-8	---	---	---	---	---
slender wheatgrass	AGTR	---	---	5-10	---	---	---
spike-fescue	LEKI2	---	1-10	5-10	---	---	---
arrowleaf balsamroot	BASA3	---	---	---	---	X	---
goldenweed	HAPLO2	2-8	---	---	---	---	---
tapertip hawkbeard	CRAC2	---	---	---	---	X	---
Douglas rabbitbrush	CHVI8	2-5	---	---	---	---	---
Stansbury cliffrose	COMBS	---	---	---	---	X	---
Utah serviceberry	AMUT	---	---	1-5	---	---	---
antelope bitterbrush	POTR1	---	---	---	---	X	---
black sagebrush	ARARN	35-45	---	---	---	X	---
curleaf mountainmahogany	CELE3	---	---	---	---	X	15-25
mountain big sagebrush	ARVA2	---	10-20	15-25	---	---	15-25
serviceberry	AMELA	---	---	---	---	X	---
snowberry	SYMPH	---	2-8	2-8	---	---	2-8
Utah juniper	JUOS	---	---	---	---	X	---
curleaf mountainmahogany	CELE3	---	---	---	---	X	15-25
singleleaf pinyon	PIMO	---	---	---	---	X	---
Range site number		028BY048NV	028BY070NV	028BY085NV	Nona	028BY050NV	028BY043NV
Potential production (lb/acre):							
Favorable years		350	1100	1500		500	1700
Normal years		200	900	1100		300	1300
Unfavorable years		100	600	700		250	900

512--ADOBE-CAVEHILL-WARDBAY ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		ADOBE	CAVEHILL	WARDBAY	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	X	5-15	---	---	---	---
Indian ricegrass	ORRY	---	---	---	10-20	X	---	---
Sandberg bluegrass	POSE	---	X	---	---	---	---	---
Thurber needlegrass	STTH2	---	---	---	---	X	---	---
basin wildrye	ELCI2	---	X	---	---	X	---	2-8
bluebunch wheatgrass	AGSP	60-80	X	60-80	20-40	X	---	40-50
bluegrass	POA++	---	---	---	2-5	X	---	5-10
bottlebrush squirreltail	SINY	---	X	---	---	X	---	---
muttongrass	POPE	2-10	X	---	---	---	---	---
needleandthread	STCO4	---	---	---	2-5	---	---	---
spike-fescue	LEKI2	---	---	1-10	---	---	---	---
arrowleaf balsamroot	BASA3	---	X	---	---	X	---	---
goldenweed	HAPLO2	2-5	---	---	2-5	---	---	---
tapertip hawksbeard	CRAC2	---	X	---	2-5	X	---	---
Stansbury cliffrose	COMES	---	---	---	---	X	---	---
Utah serviceberry	AMUT	---	---	---	---	---	---	1-5
antelope bitterbrush	PUTR2	---	X	---	---	X	---	2-10
black sagebrush	ARARN	25-35	---	---	25-35	X	---	---
curlleaf mountainmahogany	CELE3	---	X	---	---	X	---	---
mountain big sagebrush	ARVA2	---	X	10-20	---	---	---	10-20
serviceberry	AMELA	---	X	---	---	X	---	---
shadscale	ATCO	---	---	---	2-5	---	---	---
snowberry	SYMPH	---	X	2-8	---	---	---	2-5
winterfat	EULA5	---	---	---	2-5	---	---	---
Utah juniper	JUCS	---	X	---	---	X	---	---
singleleaf pinyon	PIMO	---	X	---	---	X	---	---
Range site number		028BY027NV	028BY058NV	028BY070NV	028BY008NV	028BY060NV	None	028BY088NV
Potential production (lb/acre):								
Favorable years		600	500	1100	600	500		1100
Normal years		450	300	900	400	300		900
Unfavorable years		300	200	600	200	250		700

520--HAUNCHEE-MUIRAL-WARD BAY ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		HAUNCHEE	MUIRAL	WARD BAY	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	5-15	---	---	---
Columbia needlegrass	STNE3	---	X	---	---	---	---
Letterman needlegrass	STLE4	---	X	---	---	X	---
bluebunch wheatgrass	AGSP	20-30	---	60-80	60-80	X	30-45
mountain brome	BRCA5	---	X	---	---	---	---
muttongrass	POPE	2-8	---	---	2-10	X	5-10
needlegrass	STIPA	5-15	---	---	---	---	---
pine needlegrass	STPI2	---	---	---	---	---	2-8
pinegrass	CARU	---	X	---	---	---	---
sedge	CAREX	---	---	---	---	X	---
slender wheatgrass	AGTR	---	X	---	---	---	---
spike-fescue	LEKI2	---	---	1-10	---	X	---
Fendler meadowrue	THFE	---	X	---	---	---	---
creeping barberry	BERE	---	---	---	---	X	---
dandelion	TARAX	---	X	---	---	---	---
fleabane	ERIGE2	---	X	---	---	---	---
goldenweed	HAPLO2	---	---	---	2-5	X	2-8
milkvetch	ASTRA	---	X	---	---	---	---
penstemon	PENST	---	X	---	---	---	---
starwort	STELL	---	X	---	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	2-5
black sagebrush	ARARN	---	---	---	25-35	---	35-45
common juniper	JUCO6	---	---	---	---	X	---
mountain big sagebrush	ARVA2	15-25	---	10-20	---	X	---
mountain gooseberry	RIMO2	---	X	---	---	---	---
serviceberry	AMELA	---	---	---	---	X	---
snowberry	SYMPH	2-8	X	2-8	---	---	---
western raspberry	RULE	---	X	---	---	---	---
Engelmann spruce	PIEN	---	X	---	---	---	---
bristlecone pine	PIAR	---	---	---	---	X	---
curlleaf mountainmahogany	CELE3	15-25	---	---	---	---	---
limber pine	PIPL2	---	---	---	---	X	---
quaking aspen	POTRT	---	X	---	---	---	---
white fir	ABCO	---	X	---	---	X	---

Range site number	028BY043NV	028BY072NV	028BY070NV	028BY027NV	028BY063NV	028BY048NV
Potential production (lb/acre):						
Favorable years	1700	400	1100	600	800	350
Normal years	1300	250	900	450	500	200
Unfavorable years	900	100	600	300	300	100

530--WARD-BAY-ADOBE-HAUNCHEE ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or inclusion number--						
		WARD-BAY	ADOBE	HAUNCHEE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	5-15	---	---	---	---	---	---
Columbia needlegrass	STNB3	---	---	---	---	X	---	---
Indian ricegrass	ORRY	---	---	---	---	---	---	X
Letterman needlegrass	STLB4	---	---	---	---	X	---	---
Sandberg bluegrass	POSE	---	---	---	---	---	---	X
bluebunch wheatgrass	AGSP	60-80	60-80	20-30	15-30	---	30-45	X
bottlebrush squirreltail	SIHY	---	---	---	---	---	---	X
mountain brome	BRCAS	---	---	---	5-10	X	---	---
muttongrass	POPE	---	2-10	2-8	---	---	5-10	X
needlegrass	STIPA	---	---	5-15	15-30	---	---	---
pine needlegrass	STPI2	---	---	---	---	---	2-8	---
pinegrass	CARU	---	---	---	---	X	---	---
slender wheatgrass	AGTR	---	---	---	5-10	X	---	---
spike-fescue	LEKI2	1-10	---	---	5-10	---	---	---
Fendler meadowrue	THFE	---	---	---	---	X	---	---
arrowleaf balsamroot	BASA3	---	---	---	---	---	---	X
dandelion	TARAX	---	---	---	---	X	---	---
fleabane	ERIGE2	---	---	---	---	X	---	---
goldenweed	HAPLO2	---	2-5	---	---	---	2-8	---
milkvetch	ASTRA	---	---	---	---	X	---	---
penstemon	PENST	---	---	---	---	X	---	---
phlox	PHLOX	---	---	---	---	---	---	X
starwort	STELL	---	---	---	---	X	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	2-5	---
Utah serviceberry	AMUT	---	---	---	1-5	---	---	---
antelope bitterbrush	POTR2	---	---	---	---	---	---	X
black sagebrush	ARARN	---	25-35	---	---	---	35-45	---
mountain big sagebrush	ARVA2	10-20	---	15-25	15-25	---	---	X
mountain gooseberry	RIMO2	---	---	---	---	X	---	---
serviceberry	AMBEL	---	---	---	---	---	---	X
snowberry	SYMPH	2-8	---	2-8	2-8	X	---	---
western raspberry	RULE	---	---	---	---	X	---	---
Engelmann spruce	FIEN	---	---	---	---	X	---	---
curlleaf mountainmahogany	CELE3	---	---	15-25	---	---	---	---
quaking aspen	POTRT	---	---	---	---	X	---	---
singleleaf pinyon	PIMO	---	---	---	---	---	---	X
white fir	ABCO	---	---	---	---	X	---	---

Range site number	028BY070NV	028BY027NV	028BY043NV	028BY085NV	028BY072NV	028BY048NV	028BY076NV
Potential production (lb/acre):							
Favorable years	1100	600	1700	1500	400	350	500
Normal years	900	450	1300	1100	250	200	350
Unfavorable years	600	300	900	700	100	100	200

512--ONKEYO-POOKALOO-TECOMar ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		ONKEYO	POOKALOO	TECOMar	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	---	---	---	---	30-40	15-30	---
Indian ricegrass	ORHY	2-8	X	10-20	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	---	2-5	---	---
Thurber needlegrass	STTH2	---	X	---	---	---	2-5	---
basin wildrye	ELCI2	---	X	---	---	2-10	---	20-40
bluebunch wheatgrass	AGSP	15-25	X	20-40	20-30	15-30	10-20	---
bluegrass	PQA++	5-15	X	2-5	---	---	---	5-15
bottlebrush squirreltail	SIHY	---	X	---	---	---	---	---
muttongrass	POPE	---	---	---	2-8	---	---	---
needleandthread	STCO4	---	---	2-5	---	---	---	10-20
needlegrass	STIPA	---	---	---	5-15	---	---	---
thickspike wheatgrass	AGDA	---	---	---	---	---	---	5-15
arrowleaf balsamroot	BASA3	---	X	---	---	2-5	---	---
goldenweed	HAPLO2	---	---	2-5	---	---	---	---
tapertip hawksbeard	CRAC2	---	X	2-5	---	2-5	---	---
Stansbury cliffrose	COMES	---	X	---	---	---	---	---
antelope bitterbrush	PUTR2	30-45	X	---	---	5-10	20-40	---
big sagebrush	ARTR2	---	---	---	---	---	---	10-20
black sagebrush	ARARN	---	X	25-35	---	---	---	---
curlleaf mountainmahogany	CELE3	---	X	---	15-25	---	---	---
mountain big sagebrush	ARVA2	5-15	---	---	15-25	10-20	5-10	---
rabbitbrush	CHRY89	---	---	---	---	---	---	2-5
serviceberry	AMELA	---	X	---	---	---	---	---
shadscale	ATCO	---	---	2-5	---	---	---	---
snowberry	SYMPH	---	---	---	2-8	---	---	---
winterfat	EULA5	---	---	2-5	---	---	---	---
Utah juniper	JUOS	---	X	---	---	---	---	---
curlleaf mountainmahogany	CELE3	---	X	---	15-25	---	---	---
singleleaf pinyon	PIMO	---	X	---	---	---	---	---
Range site number		028BY096NV	028BY060NV	028BY008NV	028BY043NV	025XY012NV	025XY007NV	028BY082NV
Potential production (lb/acre):								
Favorable years		1200	500	600	1700	1400	2300	1400
Normal years		900	300	400	1300	1000	1400	1100
Unfavorable years		700	250	200	900	700	900	900

S40--KUNZLER-SYCOMAT ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or inclusion number--				
		KUNZLER	SYCOMAT	Inclusion 1	Inclusion 2	Inclusion 3
Baltic rush	JURA	---	---	2-8	---	---
Indian ricegrass	OREY	2-10	2-5	---	---	---
alkali cordgrass	SPGR	---	---	10-15	---	---
alkali sacaton	SPAI	---	---	40-50	---	5-10
alkaligrass	PUCCI	---	---	2-5	---	---
basin wildrye	ELCI2	10-20	---	---	2-5	2-5
bluegrass	POA++	---	---	2-8	25-40	---
bottlebrush squirreltail	SIBY	---	2-5	---	---	---
inland saltgrass	DISPS2	---	---	2-5	---	2-8
mat muhly	MURI	---	---	---	2-5	---
rush	JunCO	---	---	---	5-15	---
sedge	CAREX	---	---	5-10	20-30	---
cinquefoil	POTEN	---	---	---	2-5	---
groundsel	SENEC	---	---	---	2-5	---
big sagebrush	ARTR2	20-30	---	---	---	---
black greasewood	SAVE4	30-40	20-30	---	---	60-75
bud sagebrush	ARSP5	---	2-10	---	---	---
rubber rabbitbrush	CHNA2	2-5	---	---	---	2-5
shadscale	ATCO	---	20-50	---	---	2-5
Range site number		028BY028NV	028BY074NV	028BY002NV	028BY001NV	028BY020NV
Potential production (lb/acre):						
Favorable years		800	600	1500	4000	500
Normal years		600	400	1000	2000	300
Unfavorable years		400	200	700	1200	150

541--KUNZLER-SHEFFIT ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		KUNZLER	SHEFFIT	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	OREY	2-10	2-10	5-10	15-25	10-25
basin wildrye	ELCI2	10-20	10-20	10-20	5-10	---
bottlebrush squirreltail	SINY	---	---	---	2-8	---
needleandthread	STCO4	---	---	---	---	2-5
other perennial grasses	PPGG	---	---	---	---	2-8
thickspike wheatgrass	AGDA	---	---	5-10	---	5-15
wheatgrass	AGROP2	---	---	---	5-15	---
Wyoming big sagebrush	ARTRW	---	---	25-35	30-45	---
big sagebrush	ARTR2	20-30	20-30	---	---	30-40
black greasewood	SAVE4	30-40	30-40	---	---	---
fourwing saltbush	ATCA2	---	---	---	---	5-15
rubber rabbitbrush	CHNA2	2-5	2-5	---	---	2-5
spiny hopsage	GRSP	---	---	---	---	5-10
winterfat	EULA5	---	---	---	2-8	---
Range site number		028BY028NV	028BY028NV	028BY045NV	028BY014NV	028BY068NV
Potential production (lb/acre):						
Favorable years		800	800	1000	600	800
Normal years		600	600	800	450	500
Unfavorable years		400	400	600	200	300

550--URMAPOT-BOBS-URMAPOT, ERODED ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		URMAPOT	BOBS	URMAPOT	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	10-20	5-15	X	10-20	---	---
Nevada bluegrass	PONE3	---	---	---	---	---	5-10
Thurber needlegrass	STTH2	---	---	X	---	---	---
basin wildrye	ELCI2	---	2-5	X	---	2-8	70-80
bluebunch wheatgrass	AGSP	20-40	30-50	X	20-40	40-50	---
bluegrass	POA++	---	2-8	X	---	5-10	---
bottlebrush squirreltail	SIHY	---	---	X	---	---	---
muttongrass	POPE	2-8	---	---	2-8	---	---
needleandthread	STCO4	2-5	2-5	---	2-5	---	---
arrowleaf balsamroot	BASA3	---	---	X	---	---	---
tapertip hawkbeard	CRAC2	---	---	X	---	---	---
Stansbury cliffrose	COMES	---	---	X	---	---	---
Utah serviceberry	AMUT	---	---	---	---	1-5	---
antelope bitterbrush	POTR2	---	---	X	---	2-10	---
basin big sagebrush	ARTR2	---	---	---	---	---	5-10
big sagebrush	ARTR2	---	20-30	---	---	---	---
black sagebrush	ARARN	20-30	---	X	20-30	---	---
curleaf mountainmahogany	CELE3	---	---	X	---	---	---
mountain big sagebrush	ARVA2	---	---	---	---	10-20	---
serviceberry	AMELA	---	---	X	---	---	---
snowberry	SYMPH	---	---	---	---	2-5	---
winterfat	EULA5	2-5	---	---	2-5	---	---
Utah juniper	JUOS	---	---	X	---	---	---
singleleaf pinyon	FINO	---	---	X	---	---	---

Range site number	028BY006NV	028BY094NV	028BY060NV	028BY006NV	028BY088NV	028BY003NV
Potential production (lb/acre):						
Favorable years	800	800	500	800	1100	5000
Normal years	600	600	300	600	900	2500
Unfavorable years	400	400	250	400	700	1500

551--URMAFOT-BOBS ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		URMAFOT	BOBS	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	10-20	5-15	2-5	10-20	2-5	2-5
Thurber needlegrass	STTH2	---	---	30-40	---	30-40	30-40
basin wildrye	ELCI2	---	2-5	---	---	---	---
bluebunch wheatgrass	AGSP	20-40	30-50	15-30	20-40	15-30	15-30
bluegrass	POA++	---	2-8	2-8	---	2-8	2-8
muttongrass	POPE	2-8	---	---	2-8	---	---
needleandthread	STCO4	2-5	2-5	2-8	2-5	2-8	2-8
arrowleaf balsamroot	BASA3	---	---	2-5	---	2-5	2-5
tapertip hawksbeard	CRAC2	---	---	2-5	---	2-5	2-5
antelope bitterbrush	PUTR2	---	---	2-10	---	2-10	2-10
big sagebrush	ARTR2	---	20-30	15-25	---	15-25	15-25
black sagebrush	ARARN	20-30	---	---	20-30	---	---
winterfat	EULA5	2-5	---	---	2-5	---	---
Range site number		028BY006NV	028BY094NV	028BY007NV	028BY006NV	028BY007NV	028BY007NV
Potential production (lb/acre):							
Favorable years		800	800	1000	800	1000	1000
Normal years		600	600	800	600	800	800
Unfavorable years		400	400	600	400	600	600

552--URMAFOT-PHARO ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		URMAFOT	PHARO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	10-20	10-20	10-20	2-8	X	---
Thurber needlegrass	STTH2	---	---	---	---	X	---
basin wildrye	ELCI2	---	---	---	---	X	20-40
bluebunch wheatgrass	AGSP	20-40	20-40	20-40	15-25	X	---
bluegrass	POA++	---	---	2-5	5-15	X	5-15
bottlebrush squirreltail	SIEY	---	---	---	---	X	---
muttongrass	POPE	2-8	2-8	---	---	---	---
needleandthread	STCO4	2-5	2-5	2-5	---	---	10-20
thickspike wheatgrass	AGDA	---	---	---	---	---	5-15
arrowleaf balsamroot	BASA3	---	---	---	---	X	---
goldenweed	HAPLO2	---	---	2-5	---	---	---
tapertip hawkbeard	CRAC2	---	---	2-5	---	X	---
Stansbury cliffrose	COMES	---	---	---	---	X	---
antelope bitterbrush	PUTR2	---	---	---	10-45	X	---
big sagebrush	ARTR2	---	---	---	---	---	10-20
black sagebrush	ARARN	20-30	20-30	25-35	---	X	---
curlleaf mountainmahogany	CELE3	---	---	---	---	X	---
mountain big sagebrush	ARVA2	---	---	---	5-15	---	---
rabbitbrush	CHRY9	---	---	---	---	---	2-5
serviceberry	AMELA	---	---	---	---	X	---
shadscale	ATCO	---	---	2-5	---	---	---
winterfat	EULAS	2-5	2-5	2-5	---	---	---
Utah juniper	JUOS	---	---	---	---	X	---
singleleaf pinyon	PIMO	---	---	---	---	X	---
Range site number		028BY006NV	028BY006NV	028BY008NV	028BY096NV	028BY060NV	028BY082NV
Potential production (lb/acre):							
Favorable years		800	800	600	1200	500	1400
Normal years		600	600	400	900	300	1100
Unfavorable years		400	400	200	700	250	900

554--URMAPOT-TECOMar ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		URMAPOT	TECOMar	URMAPOT	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORRY	10-20	10-20	X	5-15	5-10	10-20
Sandberg bluegrass	POSE	---	---	---	---	---	2-5
Thurber needlegrass	STTH2	---	---	X	---	---	---
basin wildrye	ELCI2	---	---	X	2-5	10-20	---
bluebunch wheatgrass	AGSP	20-40	20-40	X	30-50	---	---
bluegrass	FOA++	---	2-5	X	2-8	---	---
bottlebrush squirreltail	SIBY	---	---	X	---	---	2-5
muttongrass	POFE	2-8	---	---	---	---	---
needleandthread	STCO4	2-5	2-5	---	2-5	---	10-20
thickspike wheatgrass	AGDA	---	---	---	---	5-10	---
arrowleaf balsamroot	BASA3	---	---	X	---	---	---
goldenweed	HAPLO2	---	2-5	---	---	---	---
tapertip hawksbeard	CRAC2	---	2-5	X	---	---	---
Stansbury cliffrose	COMES	---	---	X	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	---
antelope bitterbrush	PUTR2	---	---	X	---	---	---
big sagebrush	ARTR2	---	---	---	20-30	---	---
black sagebrush	ARARN	20-30	25-35	X	---	---	35-45
curleaf mountainmahogany	CELE3	---	---	X	---	---	---
serviceberry	AMELA	---	---	X	---	---	---
shadscale	ATCO	---	2-5	---	---	---	2-5
winterfat	EULA5	2-5	2-5	---	---	---	---
Utah juniper	JUOS	---	---	X	---	---	---
singleleaf pinyon	PIMO	---	---	X	---	---	---
Range site number		028BY006NV	028BY008NV	028BY060NV	028BY094NV	028BY045NV	028BY016NV
Potential production (lb/acre):							
Favorable years		800	600	500	800	1000	350
Normal years		600	400	300	600	800	225
Unfavorable years		400	200	250	400	600	100

561--PALINOR-URMAFOT-PALINOR, STEEP ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		PALINOR	URMAFOT	PALINOR	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	OREY	20-35	10-20	20-35	20-30	10-20	20-30	X
Sandberg bluegrass	POSE	2-8	---	2-8	2-5	---	2-5	---
Thurber needlegrass	STH2	---	---	---	---	---	---	X
basin wildrye	ELCY2	---	---	---	---	---	---	X
bluebunch wheatgrass	AGSP	---	20-40	---	---	20-40	---	X
bluegrass	POA++	---	---	---	---	2-5	---	X
bottlebrush squirreltail	SIEY	2-5	---	2-5	2-8	---	2-5	X
muttongrass	POFE	---	2-8	---	---	---	---	---
needleandthread	STCO4	5-15	2-5	5-15	10-20	2-5	10-20	---
arrowleaf balsamroot	BASA3	---	---	---	---	---	---	X
goldenweed	HAPLO2	---	---	---	---	2-5	---	---
tapertip hawkbeard	CRAC2	---	---	---	---	2-5	---	X
Stansbury cliffrose	COMES	---	---	---	---	---	---	X
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	25-35	---
antelope bitterbrush	PUTR2	---	---	---	---	---	---	X
black sagebrush	ARARN	25-35	20-30	25-35	---	25-35	---	X
curlleaf mountainmahogany	CELS3	---	---	---	---	---	---	X
downy rabbitbrush	CHVIP4	2-5	---	2-5	---	---	---	---
rabbitbrush	CHRY89	---	---	---	2-5	---	---	---
serviceberry	AMELA	---	---	---	---	---	---	X
shadscale	ATCO	2-5	---	2-5	---	2-5	---	---
winterfat	EULA5	---	2-5	---	---	2-5	---	---
Utah juniper	JUOS	---	---	---	---	---	---	X
singleleaf pinyon	PIMO	---	---	---	---	---	---	X
Range site number		028BY011NV	028BY006NV	028BY011NV	028BY010NV	028BY008NV	028BY080NV	028BY060NV
Potential production (lb/acre):								
Favorable years		600	800	600	800	600	600	500
Normal years		450	600	450	600	400	400	300
Unfavorable years		250	400	250	400	200	200	250

562--BOBS VERY GRAVELLY LOAM, 2 TO 8 PERCENT SLOPES

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		BOBS	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	5-15	5-15	5-10	---	20-35
Nevada bluegrass	PONE3	---	---	---	5-10	---
Sandberg bluegrass	POSE	---	---	---	---	2-8
basin wildrye	ELCI2	2-5	2-5	10-20	70-80	---
bluebunch wheatgrass	AGSP	30-50	30-50	---	---	---
bluegrass	POA++	2-8	2-8	---	---	---
bottlebrush squirreltail	SIHY	---	---	---	---	2-5
needleandthread	STCO4	2-5	2-5	---	---	5-15
thickspike wheatgrass	AGDA	---	---	5-10	---	---
Wyoming big sagebrush	ARTRW	---	---	25-35	---	---
basin big sagebrush	ARTRT	---	---	---	5-10	---
big sagebrush	ARTR2	20-30	20-30	---	---	---
black sagebrush	ARARN	---	---	---	---	25-35
downy rabbitbrush	CHVIP4	---	---	---	---	2-5
shadscale	ATCO	---	---	---	---	2-5
Range site number		028BY094NV	028BY094NV	028BY045NV	028BY003NV	028BY011NV
Potential production (lb/acre):						
Favorable years		800	800	1000	5000	600
Normal years		600	600	800	2500	450
Unfavorable years		400	400	600	1500	250

563--BOBS-PYRAT ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		BOBS	PYRAT	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	2-5	2-5	2-5	20-35
Sandberg bluegrass	POSE	---	---	---	2-8
Thurber needlegrass	STTH2	30-40	30-40	30-40	---
bluebunch wheatgrass	AGSP	15-30	15-30	15-30	---
bluegrass	POA++	2-8	2-8	2-8	---
bottlebrush squirreltail	SIFY	---	---	---	2-5
needleandthread	STCO4	2-8	2-8	2-8	5-15
arrowleaf balsamroot	BASA3	2-5	2-5	2-5	---
tapertip hawkbeard	CRAC2	2-5	2-5	2-5	---
antelope bitterbrush	PUTR2	2-10	2-10	2-10	---
big sagebrush	ARTR2	15-25	15-25	15-25	---
black sagebrush	ARARN	---	---	---	25-35
downy rabbitbrush	CHVIP4	---	---	---	2-5
shadscale	ATCO	---	---	---	2-5
Range site number		028BY007NV	028BY007NV	028BY007NV	028BY011NV
Potential production (lb/acre):					
Favorable years		1000	1000	1000	600
Normal years		800	800	800	450
Unfavorable years		600	600	600	250

575--POOKALOC-CAVEHILL-ROCK OUTCROP ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		POOKALOC	CAVEHILL	ROCK OUTCROP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	X	---	---	---	---	X
Indian ricegrass	ORBY	X	---	---	10-20	---	5-15	X
Sandberg bluegrass	POSE	---	X	---	---	---	---	X
Thurber needlegrass	STH2	X	---	---	---	---	---	X
basin wildrye	ELCI2	X	X	---	---	---	2-5	X
bluebunch wheatgrass	AGSP	X	X	---	20-40	20-30	30-50	X
bluegrass	POA++	X	---	---	2-5	---	2-8	---
bottlebrush squirreltail	SIHY	X	X	---	---	---	---	X
muttongrass	POFE	---	X	---	---	2-8	---	---
needleandthread	STCO4	---	---	---	2-5	---	2-5	---
needlegrass	STIPA	---	---	---	---	5-15	---	---
arrowleaf balsamroot	BASA3	X	X	---	---	---	---	X
goldenweed	HAPLO2	---	---	---	2-5	---	---	---
tapertip hawkbeard	CRAC2	X	X	---	2-5	---	---	X
Stansbury cliffrose	COMES	X	---	---	---	---	---	---
antelope bitterbrush	PUTR2	X	X	---	---	---	---	X
big sagebrush	ARTR2	---	---	---	---	---	20-30	---
black sagebrush	ARARN	X	---	---	25-35	---	---	---
curleaf mountainmahogany	CELE3	X	X	---	---	15-25	---	---
ephedra	EPHED	---	---	---	---	---	---	X
mountain big sagebrush	ARVA2	---	X	---	---	15-25	---	X
serviceberry	AMELA	X	X	---	---	---	---	X
shadscale	ATCO	---	---	---	2-5	---	---	---
snowberry	SYMPR	---	X	---	---	2-8	---	---
winterfat	EULA5	---	---	---	2-5	---	---	---
Utah juniper	JUOS	X	X	---	---	---	---	X
curleaf mountainmahogany	CELE3	X	X	---	---	15-25	---	---
singleleaf pinyon	PIMO	X	X	---	---	---	---	X
Range site number		028BY060NV	028BY058NV	None	028BY008NV	028BY043NV	028BY094NV	028BY062NV
Potential production (lb/acre):								
Favorable years		500	500		600	1700	800	700
Normal years		300	300		400	1300	600	500
Unfavorable years		250	200		200	900	400	300

576--POOKALOO-TECOMar-ONKEYO ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		POOKALOO	TECOMar	ONKEYO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	X	10-20	15-30	10-20	5-15	---	5-10
Sandberg bluegrass	POSE	---	---	---	2-5	---	---	---
Thurber needlegrass	STH2	X	---	---	---	---	---	---
basin wildrye	ELCI2	X	---	---	---	2-5	---	10-20
bluebunch wheatgrass	AGSP	X	20-40	30-40	---	30-50	---	---
bluegrass	POA++	X	2-5	5-10	---	2-8	---	---
bottlebrush squirreltail	SIHY	X	---	---	2-5	---	---	---
needleandthread	STCO4	---	2-5	---	10-20	2-5	---	---
thickspike wheatgrass	AGDA	---	---	---	---	---	---	5-10
arrowleaf balsamroot	BASA3	X	---	---	---	---	---	---
goldenweed	HAPLO2	---	2-5	---	---	---	---	---
tapertip hawkbeard	CRAC2	X	2-5	---	---	---	---	---
Stansbury cliffrose	COMES	X	---	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	25-35
antelope bitterbrush	POTR2	X	---	5-10	---	---	---	---
big sagebrush	ARTR2	---	---	---	---	20-30	---	---
black sagebrush	ARARN	X	25-35	---	35-45	---	---	---
curleaf mountainmahogany	CELE3	X	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	---	15-25	---	---	---	---
serviceberry	AMELA	X	---	---	---	---	---	---
shadscale	ATCO	---	2-5	---	2-5	---	---	---
winterfat	EULA5	---	2-5	---	---	---	---	---
Utah juniper	JUOS	X	---	---	---	---	---	---
singleleaf pinyon	PIMO	X	---	---	---	---	---	---
Range site number		028BY060NV	028BY008NV	028BY079NV	028BY016NV	028BY094NV	None	028BY045NV
Potential production (lb/acre):								
Favorable years		500	600	700	350	800		1000
Normal years		300	400	500	225	600		800
Unfavorable years		250	200	300	100	400		600

582--SHEFFIT-KATELANA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		SHEFFIT	SHEFFIT	KATELANA	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	2-10	2-5	10-25	2-5	---
basin wildrye	ELCI2	40-60	10-20	---	---	---	2-5
bluegrass	POA++	---	---	---	---	---	25-40
bottlebrush squirreltail	SIHY	---	---	2-5	---	2-5	---
creeping wildrye	ELTR3	5-30	---	---	---	---	---
mat muhly	MURI	---	---	---	---	---	2-5
needleandthread	STCO4	---	---	---	2-5	---	---
other perennial grasses	PPGG	---	---	---	2-8	---	---
rush	JunCU	---	---	---	---	---	5-15
sedge	CAREX	---	---	---	---	---	20-30
thickspike wheatgrass	AGDA	---	---	---	5-15	---	---
cinquefoil	POTEN	---	---	---	---	---	2-5
groundsel	SENEC	---	---	---	---	---	2-5
big sagebrush	ARTR2	5-15	20-30	---	30-40	---	---
black greasewood	SAVE4	---	30-40	20-30	---	20-30	---
bud sagebrush	ARSP5	---	---	2-10	---	2-10	---
fourwing saltbush	ATCA2	---	---	---	5-15	---	---
rubber rabbitbrush	CHNA2	---	2-5	---	2-5	---	---
shadscale	ATCO	---	---	20-50	---	20-50	---
spiny hopsage	GRSP	---	---	---	5-10	---	---

Range site number	028AY025NV	028BY028NV	028BY074NV	028BY068NV	028BY074NV	028BY001NV
Potential production (lb/acre):						
Favorable years	1800	800	600	800	600	4000
Normal years	1500	600	400	500	400	2000
Unfavorable years	1100	400	200	300	200	1200

590--UPATAD-SEGURA ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		UPATAD	SEGURA	Inclusion 1	Inclusion 2
Canby bluegrass	POCA	---	---	---	X
Indian ricegrass	ORHY	X	---	2-5	X
Sandberg bluegrass	POSE	---	---	---	X
Thurber needlegrass	STTH2	X	15-30	30-40	X
basin wildrye	ELCI2	X	2-8	---	X
bluebunch wheatgrass	AGSP	X	20-40	15-30	X
bluegrass	POA++	X	2-5	2-8	---
bottlebrush squirreltail	SIHY	X	---	---	X
needleandthread	STCO4	---	---	2-8	---
arrowleaf balsamroot	BASA3	X	---	2-5	X
crag aster	ASSC3	---	2-5	---	---
tapertip hawksbeard	CRAC2	X	2-5	2-5	X
Stansbury cliffrose	COMES	X	---	---	---
antelope bitterbrush	PUTR2	X	5-10	2-10	X
big sagebrush	ARTR2	---	---	15-25	---
black sagebrush	ARARN	X	---	---	---
curlleaf mountainmahogany	CELE3	X	---	---	---
ephedra	EPHED	---	---	---	X
mountain big sagebrush	ARVA2	---	15-25	---	X
serviceberry	AMELA	X	---	---	X
Utah juniper	JUOS	X	---	---	X
singleleaf pinyon	PIMO	X	---	---	X
Range site number		028BY060NV	028BY087NV	028BY007NV	028BY062NV
Potential production (lb/acre):					
Favorable years		500	900	1000	700
Normal years		300	700	800	500
Unfavorable years		250	450	600	300

600--ONKEYO-AMENE-POOKALOO ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		ONKEYO	AMENE	POOKALOO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	2-8	15-30	X	---	---	2-5	---
Thurber needlegrass	STTH2	---	---	X	---	---	30-40	---
basin wildrye	ELCI2	---	---	X	---	---	---	---
bluebunch wheatgrass	AGSP	15-25	30-40	X	60-80	20-30	15-30	---
bluegrass	FOA++	5-15	5-10	X	---	---	2-8	---
bottlebrush squirreltail	SIHY	---	---	X	---	---	---	---
muttongrass	FOFE	---	---	---	2-10	2-8	---	---
needleandthread	STCO4	---	---	---	---	---	2-8	---
needlegrass	STIPA	---	---	---	---	5-15	---	---
arrowleaf balsamroot	BASA3	---	---	X	---	---	2-5	---
goldenweed	HAPLO2	---	---	---	2-5	---	---	---
tapertip hawksbeard	CRAC2	---	---	X	---	---	2-5	---
Stansbury cliffrose	COMES	---	---	X	---	---	---	---
antelope bitterbrush	FUTR2	30-45	5-10	X	---	---	2-10	---
big sagebrush	ARTR2	---	---	---	---	---	15-25	---
black sagebrush	ARARN	---	---	X	25-35	---	---	---
curlleaf mountainmahogany	CELE3	---	---	X	---	15-25	---	---
mountain big sagebrush	ARVA2	5-15	15-25	---	---	15-25	---	---
serviceberry	AMELA	---	---	X	---	---	---	---
snowberry	SYMPH	---	---	---	---	2-8	---	---
Utah juniper	JUOS	---	---	X	---	---	---	---
curlleaf mountainmahogany	CELE3	---	---	X	---	15-25	---	---
singleleaf pinyon	PIMO	---	---	X	---	---	---	---
Range site number		028BY096NV	028BY079NV	028BY060NV	028BY027NV	028BY043NV	028BY007NV	None
Potential production (lb/acre):								
Favorable years		1200	700	500	600	1700	1000	
Normal years		900	500	300	450	1300	800	
Unfavorable years		700	300	250	300	900	600	

610--WINTERMUTE-EASTWELL ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		WINTERMUTE	EASTWELL	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	40-50	20-35	40-50	15-25	20-30
Sandberg bluegrass	POSE	---	2-8	---	---	2-5
bottlebrush squirreltail	SIBY	2-5	2-5	2-5	2-5	2-8
needleandthread	STCO4	---	5-15	---	5-10	10-20
globemallow	SPHAE	1-5	---	1-5	---	---
scarlet globemallow	SPCO	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	---	20-35	25-35
black sagebrush	ARARN	---	25-35	---	---	---
downy rabbitbrush	CHVIP4	---	2-5	---	---	---
rabbitbrush	CHRY89	---	---	---	---	2-5
shadscale	ATCO	25-35	2-5	25-35	2-5	---
spiny hopsage	GRSP	---	---	---	5-20	---
winterfat	EULA5	5-10	---	5-10	---	---
Range site number		028BY075NV	028BY011NV	028BY075NV	028BY052NV	028BY010NV
Potential production (lb/acre):						
Favorable years		700	600	700	800	800
Normal years		500	450	500	600	600
Unfavorable years		300	250	300	450	400

614--WINTERMUTE-EASTWELL-ZERK ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		WINTERMUTE	EASTWELL	ZERK	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	40-50	20-35	40-50	15-25	10-20
Sandberg bluegrass	POSE	---	2-8	---	---	---
bottlebrush squirreltail	SIHY	2-5	2-5	2-5	2-5	2-5
needleandthread	STCO4	---	5-15	---	5-10	---
globemallow	SPHAE	1-5	---	---	---	2-5
scarlet globemallow	SPCO	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	---	20-35	---
black sagebrush	ARARN	---	25-35	---	---	---
bud sagebrush	ARSP5	---	---	5-15	---	---
downy rabbitbrush	CHVIP4	---	2-5	---	---	---
fourwing saltbush	ATCA2	---	---	---	---	15-30
shadscale	ATCO	25-35	2-5	---	2-5	---
spiny hopsage	GRSP	---	---	---	5-20	10-20
winterfat	EULA5	5-10	---	20-30	---	2-5
Range site number		028BY075NV	028BY011NV	028BY084NV	028BY052NV	028BY078NV
Potential production (lb/acre):						
Favorable years		700	600	900	800	600
Normal years		500	450	700	600	500
Unfavorable years		300	250	400	450	400

617--WINTERMUTE-ZERK-LORAY ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		WINTERMUTE	ZERK	LORAY	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	40-50	40-50	15-25	15-25	10-20	15-25
King desertgrass	BLKI	---	---	2-5	---	---	---
Sandberg bluegrass	POSE	---	---	---	---	2-5	---
bottlebrush squirreltail	SIHY	2-5	2-5	---	2-5	2-5	5-10
galleta	HIJA	---	---	2-8	---	---	---
needleandthread	STCO4	---	---	---	5-10	10-20	---
other perennial grasses	PFGG	---	---	---	---	---	2-5
globemallow	SPHA2	1-5	---	2-5	---	---	2-5
scarlet globemallow	SPCO	---	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	---	20-35	---	---
black sagebrush	ARARN	---	---	---	---	35-45	---
bud sagebrush	ARSP5	---	5-15	5-10	---	---	2-8
fourwing saltbush	ATCA2	---	---	---	---	---	2-5
gray molly kochia	KOAMV	---	---	2-5	---	---	---
shadscale	ATCO	25-35	---	40-50	2-5	2-5	---
spiny hopsage	GRSP	---	---	---	5-20	---	---
winterfat	EULAS	5-10	20-30	2-8	---	---	40-50
Range site number		028BY075NV	028BY084NV	028AY012NV	028BY052NV	028BY016NV	028BY013NV
Potential production (lb/acre):							
Favorable years		700	900	500	800	350	700
Normal years		500	700	300	600	225	500
Unfavorable years		300	400	200	450	100	350

620--ATLOW ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or inclusion number--			
		ATLOW	ATLOW	Inclusion 1	Inclusion 2
Indian ricegrass	ORRY	20-30	20-30	---	15-25
Thurber needlegrass	STTH2	15-25	15-25	---	---
bottlebrush squirreltail	SIHY	---	---	---	2-5
needleandthread	STCO4	2-8	2-8	---	5-10
scarlet globemallow	SPCO	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	---	20-35
black sagebrush	ARARN	20-35	20-35	---	---
shadscale	ATCO	---	---	---	2-5
spiny hopsage	GRSP	---	---	---	5-20
Range site number		028BY089NV	028BY089NV	None	028BY052NV
Potential production (lb/acre):					
Favorable years		450	450		800
Normal years		300	300		600
Unfavorable years		150	150		450

631--EASTWELL-WINTERMUTE-OKAN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		EASTWELL	WINTERMUTE	OKAN	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORRY	20-35	40-50	15-25	20-35	20-35	2-10
Sandberg bluegrass	POSE	2-8	---	---	2-8	2-8	2-5
bottlebrush squirreltail	SIHY	2-5	2-5	2-5	2-5	2-5	2-5
needleandthread	STCO4	5-15	---	5-10	5-15	5-15	2-10
globemallow	SPHAE	---	1-5	---	---	---	---
scarlet globemallow	SPCO	---	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	20-35	---	---	---
black sagebrush	ARARN	25-35	---	---	25-35	25-35	---
downy rabbitbrush	CHVIP4	2-5	---	---	2-5	2-5	---
pygmy sagebrush	ARPY2	---	---	---	---	---	50-70
shadscale	ATCO	2-5	25-35	2-5	2-5	2-5	---
spiny hopsage	GRSP	---	---	5-20	---	---	---
winterfat	EULA5	---	5-10	---	---	---	---
Range site number		028BY011NV	028BY075NV	028BY052NV	028BY011NV	028BY011NV	028BY040NV
Potential production (lb/acre):							
Favorable years		600	700	800	600	600	250
Normal years		450	500	600	450	450	175
Unfavorable years		250	300	450	250	250	100

632--EASTWELL-ZAPOD ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		EASTWELL	ZAPOD	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-35	20-30	20-30	40-50	5-10	20-35
Sandberg bluegrass	POSE	2-8	2-5	2-5	---	2-5	2-8
Scribner needlegrass	STSC2	---	---	---	---	2-5	---
bluebunch wheatgrass	AGSF	---	---	---	---	15-25	---
bottlebrush squirreltail	SINY	2-5	2-8	2-8	2-5	---	2-5
needleandthread	STCO4	5-15	10-20	10-20	---	---	5-15
globemallow	SPHAE	---	---	---	1-5	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	2-5	---
Mexican cliffrose	COMES	---	---	---	---	1-10	---
Wyoming big sagebrush	ARTRW	---	25-35	25-35	---	---	---
black sagebrush	ARARN	25-35	---	---	---	30-40	25-35
downy rabbitbrush	CHVIP4	2-5	---	---	---	---	2-5
rabbitbrush	CHRY89	---	2-5	2-5	---	---	---
shadscale	ATCO	2-5	---	---	25-35	---	2-5
winterfat	EULA5	---	---	---	5-10	---	---
singleleaf pinyon	PIMO	---	---	---	---	10-15	---
Range site number		028BY011NV	028BY010NV	028BY010NV	028BY075NV	028BY090NV	028BY011NV
Potential production (lb/acre):							
Favorable years		600	800	800	700	400	600
Normal years		450	600	600	500	250	450
Unfavorable years		250	400	400	300	125	250

634--EASTWELL-SHABLISS-IZAR ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		EASTWELL	SHABLISS	IZAR	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	20-35	20-30	20-35	X	20-30
Sandberg bluegrass	POSE	2-8	2-5	2-8	---	2-5
basin wildrye	ELCI2	---	---	---	X	---
bluegrass	POA++	---	---	---	X	---
bottlebrush squirreltail	SINY	2-5	2-8	2-5	X	2-8
needleandthread	STCO4	5-15	10-20	5-15	X	10-20
thickstem wildcabbage	CACR11	---	---	---	X	---
Utah juniper	JUOS	---	---	---	X	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	25-35
antelope bitterbrush	PUTR2	---	---	---	X	---
black sagebrush	ARARN	25-35	---	25-35	X	---
downy rabbitbrush	CHVIP4	2-5	---	2-5	---	---
rabbitbrush	CHRY89	---	2-5	---	---	2-5
shadscale	ATCO	2-5	---	2-5	---	---
Range site number		028BY011NV	028BY010NV	028BY011NV	028BY083NV	028BY010NV
Potential production (lb/acre):						
Favorable years		600	800	600	300	800
Normal years		450	600	450	200	600
Unfavorable years		250	400	250	125	400

636--EASTWELL-HUNDRAW-OKAN ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		EASTWELL	HUNDRAW	OKAN	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORRY	20-35	X	15-25	20-30	10-20	20-35
Sandberg bluegrass	POSE	2-8	---	---	2-5	---	2-8
basin wildrye	ELCT2	---	X	---	---	---	---
bluebunch wheatgrass	AGSP	---	---	---	---	20-40	---
bluegrass	POA++	---	X	---	---	---	---
bottlebrush squirreltail	SIHY	2-5	X	2-5	2-8	---	2-5
muttongrass	POFE	---	---	---	---	2-8	---
needleandthread	STCO4	5-15	X	5-10	10-20	2-5	5-15
scarlet globemallow	SPCO	---	---	2-5	---	---	---
thickstem wildcabbage	CACR11	---	X	---	---	---	---
Utah juniper	JUOS	---	X	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	20-35	25-35	---	---
antelope bitterbrush	PUTR1	---	X	---	---	---	---
black sagebrush	ARARN	25-35	X	---	---	20-30	25-35
downy rabbitbrush	CHVIP4	2-5	---	---	---	---	2-5
rabbitbrush	CHRY89	---	---	---	2-5	---	---
shadscale	ATCO	2-5	---	2-5	---	---	2-5
spiny hopsage	GRSP	---	---	5-20	---	---	---
winterfat	EULA5	---	---	---	---	2-5	---

Range site number	028BY011NV	028BY083NV	028BY052NV	028BY010NV	028BY006NV	028BY011NV
Potential production (lb/acre):						
Favorable years	600	300	800	800	800	600
Normal years	450	200	600	600	600	450
Unfavorable years	250	125	450	400	400	250

650--MIZPAH-ZERK-WINTERMUTE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		MIZPAH	ZERK	WINTERMUTE	Inclusion 1
Indian ricegrass	OREY	2-10	40-50	40-50	20-35
Sandberg bluegrass	POSE	2-5	---	---	2-8
bottlebrush squirreltail	SIHY	2-5	2-5	2-5	2-5
needleandthread	STCO4	2-10	---	---	5-15
globemallow	SPHAE	---	---	1-5	---
black sagebrush	ARARN	---	---	---	25-35
bud sagebrush	ARSP5	---	5-15	---	---
downy rabbitbrush	CHVIP4	---	---	---	2-5
pigmy sagebrush	ARPY2	50-70	---	---	---
shadscale	ATCO	---	---	25-35	2-5
winterfat	EULAS	---	20-30	5-10	---
Range site number		028BY040NV	028BY084NV	028BY075NV	028BY011NV
Potential production (lb/acre):					
Favorable years		250	900	700	600
Normal years		175	700	500	450
Unfavorable years		100	400	300	250

671--IDWAY-MYSOL ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		IDWAY	MYSOL	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	2-10	1-5	2-10	20-30
basin wildrye	ELCT2	10-20	---	10-20	---
bottlebrush squirreltail	SIHY	---	5-10	---	10-20
globemallow	SPHA2	---	---	---	2-4
big sagebrush	ARTR2	20-30	---	20-30	---
black greasewood	SAVE4	30-40	---	30-40	---
rubber rabbitbrush	CHNA2	2-5	---	2-5	---
shadscale	ATCO	---	85-90	---	45-50
Range site number		028BY028NV	028BY073NV	028BY028NV	028BY009NV
Potential production (lb/acre):					
Favorable years		800	400	800	500
Normal years		600	300	600	400
Unfavorable years		400	200	400	300

672--IDWAY-JAMES CANYON, DRAINED ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		IDWAY	JAMES CANYON	Inclusion 1	Inclusion 2
Indian ricegrass	CRHY	2-10	---	---	---
alkali sacaton	SPAI	---	20-30	5-15	15-40
basin wildrye	ELCI2	10-20	2-5	2-8	40-60
bluegrass	POA++	---	---	25-50	---
inland saltgrass	DISPS2	---	---	---	2-5
mat muhly	MURI	---	30-40	30-40	---
rush	JuncU	---	5-10	---	---
western wheatgrass	AGSM	---	---	2-8	2-5
aster	ASTER	---	2-5	---	---
Douglas rabbitbrush	CHVI8	---	1-5	---	---
basin big sagebrush	ARTRT	---	2-5	---	---
big sagebrush	ARTR2	20-30	---	---	---
black greasewood	SAVE4	30-40	1-5	---	5-15
rubber rabbitbrush	CHNA2	2-5	5-10	---	2-5
Range site number		028BY028NV	028BY031NV	028BY100NV	028BY004NV
Potential production (lb/acre):					
Favorable years		800	1200	1500	2200
Normal years		600	1000	1100	1500
Unfavorable years		400	400	700	800

680--SIMON-GRALEY-CHEN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		SIMON	GRALEY	CHEN	Inclusion 1	Inclusion 2
Idaho fescue	FEID	40-60	30-40	---	---	---
Indian ricegrass	ORRY	---	---	---	---	2-5
Nevada bluegrass	PONE3	2-8	2-5	---	---	---
Thurber needlegrass	STTH2	---	---	---	15-30	---
basin wildrye	ELCI2	2-8	2-10	---	2-8	---
bluebunch wheatgrass	AGSP	5-15	15-30	20-30	20-40	10-20
bluegrass	POA++	---	---	2-10	2-5	2-8
needlegrass	STIPA	---	---	---	---	5-10
arrowleaf balsamroot	BASA3	---	2-5	---	---	---
crag aster	ASSC3	---	---	---	2-5	---
tapertip hawksbeard	CRAC2	---	2-5	---	2-5	---
antelope bitterbrush	PUTR2	---	5-10	2-5	5-10	30-45
basin big sagebrush	ARTRT	10-20	---	---	---	---
low sagebrush	ARAR8	---	---	25-35	---	---
mountain big sagebrush	ARVA2	---	10-20	---	15-25	5-15
Range site number		025XY027NV	025XY012NV	028BY037NV	028BY087NV	028BY046NV
Potential production (lb/acre):						
Favorable years		1300	1400	800	900	1200
Normal years		900	1000	600	700	900
Unfavorable years		500	700	400	450	700

691--TARNACH-WESFIL ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or inclusion number--						
		TARNACH	TARNACH	WESFIL	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	10-20	10-20	10-20	5-15	15-25	2-5	10-25
Sandberg bluegrass	POSE	---	---	2-5	---	---	---	---
Thurber needlegrass	STTH2	---	---	---	---	---	10-20	---
basin wildrye	ELCI2	---	---	---	2-5	---	---	---
bluebunch wheatgrass	AGSP	20-40	20-40	---	30-50	---	20-30	---
bluegrass	POA++	2-5	---	---	2-8	---	2-8	---
bottlebrush squirreltail	SIHY	---	---	2-5	---	2-5	---	2-5
galleta	HIJA	---	---	---	---	---	---	2-8
muttongrass	POFE	---	2-8	---	---	---	---	---
needleandthread	STCO4	2-5	2-5	10-20	2-5	5-10	---	2-10
goldenweed	HAPLO2	2-5	---	---	---	---	---	---
scarlet globemallow	SPCO	---	---	---	---	2-5	---	---
tapertip hawkbeard	CRAC2	2-5	---	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	20-35	---	---
big sagebrush	ARTR2	---	---	---	20-30	---	---	---
black sagebrush	ARARN	25-35	20-30	35-45	---	---	25-35	---
bud sagebrush	ARSF5	---	---	---	---	---	---	2-10
shadscale	ATCO	2-5	---	2-5	---	2-5	---	15-25
spiny hopsage	GRSP	---	---	---	---	5-20	---	---
winterfat	EULA5	2-5	2-5	---	---	---	---	2-5
Range site number		028BY008NV	028BY006NV	028BY016NV	028BY094NV	028BY052NV	028BY093NV	028AY003NV
Potential production (lb/acre):								
Favorable years		600	800	350	800	800	800	250
Normal years		400	600	225	600	600	600	150
Unfavorable years		200	400	100	400	450	400	75

692--TARNACH-UPATAD-WESFIL ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		TARNACH	UPATAD	WESFIL	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	X	---	---
Indian ricegrass	ORHY	10-20	2-5	10-20	---	X	20-30	20-35
Sandberg bluegrass	POSE	---	---	2-5	---	X	2-5	2-8
Thurber needlegrass	STTH2	---	10-20	---	15-30	X	---	---
basin wildrye	ELCI2	---	---	---	2-8	X	---	---
bluebunch wheatgrass	AGSP	20-40	20-30	---	20-40	X	---	---
bluegrass	POA++	2-5	2-8	---	2-5	---	---	---
bottlebrush squirreltail	SIRY	---	---	2-5	---	X	2-8	2-5
needleandthread	STCO4	2-5	---	10-20	---	---	10-20	5-15
arrowleaf balsamroot	BASA3	---	---	---	---	X	---	---
crag aster	ASSC3	---	---	---	2-5	---	---	---
goldenweed	HAPLO2	2-5	---	---	---	---	---	---
tapertip hawkbeard	CRAC2	2-5	---	---	2-5	X	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	25-35	---
antelope bitterbrush	PUTR2	---	---	---	5-10	X	---	---
black sagebrush	ARARN	25-35	25-35	35-45	---	---	---	25-35
downy rabbitbrush	CHVIP4	---	---	---	---	---	---	2-5
ephedra	EPHED	---	---	---	---	X	---	---
mountain big sagebrush	ARVA2	---	---	---	15-25	X	---	---
rabbitbrush	CHRY89	---	---	---	---	---	2-5	---
serviceberry	AMELA	---	---	---	---	X	---	---
shadscale	ATCO	2-5	---	2-5	---	---	---	2-5
winterfat	EULA5	2-5	---	---	---	---	---	---
Utah juniper	JUOS	---	---	---	---	X	---	---
singleleaf pinyon	PIMO	---	---	---	---	X	---	---
Range site number		028BY008NV	028BY093NV	028BY016NV	028BY087NV	028BY062NV	028BY010NV	028BY011NV
Potential production (lb/acre):								
Favorable years		600	800	350	900	700	800	600
Normal years		400	600	225	700	500	600	450
Unfavorable years		200	400	100	450	300	400	250

700--SHABLISS-TULASE-LINOYER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		SHABLISS	TULASE	LINOYER	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	20-30	5-10	15-25	15-25	40-50	10-20	20-35
Sandberg bluegrass	POSE	2-5	---	---	---	---	---	2-8
basin wildrye	ELCI2	---	10-20	---	---	---	---	---
bottlebrush squirreltail	SIBY	2-8	---	5-10	2-5	2-5	5-15	2-5
needleandthread	STCO4	10-20	---	---	5-10	---	---	5-15
other perennial grasses	PPGG	---	---	2-5	---	---	---	---
thickspike wheatgrass	AGDA	---	5-10	---	---	---	---	---
globemallow	SPHA2	---	---	2-5	---	---	---	---
scarlet globemallow	SPCO	---	---	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	25-35	25-35	---	20-35	---	---	---
black sagebrush	ARARN	---	---	---	---	---	---	25-35
bud sagebrush	ARSP5	---	---	2-8	---	5-15	10-25	---
downy rabbitbrush	CEVIP4	---	---	---	---	---	---	2-5
fourwing saltbush	ATCA2	---	---	2-5	---	---	---	---
rabbitbrush	CHRY89	2-5	---	---	---	---	---	---
shadscale	ATCO	---	---	---	2-5	---	40-50	2-5
spiny hopsage	GRSP	---	---	---	5-20	---	---	---
winterfat	EULAS	---	---	40-50	---	20-30	---	---
Range site number		028BY010NV	028BY045NV	028BY013NV	028BY052NV	028BY084NV	028BY017NV	028BY011NV
Potential production (lb/acre):								
Favorable years		800	1000	700	800	900	400	600
Normal years		600	800	500	600	700	300	450
Unfavorable years		400	600	350	450	400	200	250

720--MYSOL ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		MYSOL	MYSOL	Inclusion 1	Inclusion 2
Indian ricegrass	ORBY	2-5	1-5	2-5	2-10
basin wildrye	ELCI2	---	---	---	10-20
bottlebrush squirreltail	SIHY	2-5	5-10	2-5	---
big sagebrush	ARTR2	---	---	---	20-30
black greasewood	SAVE4	20-30	---	20-30	30-40
bud sagebrush	ARSP5	2-10	---	2-10	---
rubber rabbitbrush	CHNA2	---	---	---	2-5
shadscale	ATCO	20-50	85-90	20-50	---
Range site number		028BY074NV	028BY073NV	028BY074NV	028BY028NV
Potential production (lb/acre):					
Favorable years		600	400	600	800
Normal years		400	300	400	600
Unfavorable years		200	200	200	400

730--IDWAY-KAWICH-MYSOL ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		IDWAY	KAWICH	MYSOL	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	2-10	5-10	2-5	1-5	---
alkali sacaton	SPA7	---	---	---	---	15-40
basin wildrye	ELCI2	10-20	2-5	---	---	40-60
bottlebrush squirreltail	SIHY	---	---	2-5	5-10	---
inland saltgrass	DISPS2	---	---	---	---	2-5
thickspike wheatgrass	AGDA	---	2-5	---	---	---
western wheatgrass	AGSM	---	---	---	---	2-5
big sagebrush	ARTR2	20-30	---	---	---	---
black greasewood	SAVE4	30-40	40-60	20-30	---	5-15
bud sagebrush	ARSP5	---	---	2-10	---	---
fourwing saltbush	ATCA2	---	5-10	---	---	---
rubber rabbitbrush	CHNA2	2-5	---	---	---	2-5
shadscale	ATCO	---	5-10	20-50	85-90	---
Range site number		028BY028NV	028BY021NV	028BY074NV	028BY073NV	028BY004NV
Potential production (lb/acre):						
Favorable years		800	400	600	400	2200
Normal years		600	300	400	300	1500
Unfavorable years		400	200	200	200	800

733--IDWAY-IDWAY, MOIST-MYSOL ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		IDWAY	IDWAY	MYSOL	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	2-10	20-30	2-5	20-30	---	---	---
Sandberg bluegrass	POSE	---	2-5	---	---	---	5-10	---
alkali sacaton	SPAI	---	---	---	---	5-10	---	---
basin wildrye	ELCI2	10-20	---	---	---	2-5	---	---
bottlebrush squizreiltail	SIHY	---	2-8	2-5	10-20	---	5-15	---
inland saltgrass	DISPS2	---	---	---	---	2-8	---	---
needleandthread	STCO4	---	10-20	---	---	---	---	---
globemallow	SPHAE	---	---	---	2-4	---	---	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	---	60-70	---
big sagebrush	ARTRW	20-30	---	---	---	---	---	---
black greasewood	SAVE4	30-40	---	20-30	---	60-75	---	---
bud sagebrush	ARSP5	---	---	2-10	---	---	---	---
rabbitbrush	CHRY89	---	2-5	---	---	---	---	---
rubber rabbitbrush	CHNA2	2-5	---	---	---	2-5	---	---
shadescale	ATCO	---	---	20-50	45-50	2-5	---	---
Range site number		028BY028NV	028BY010NV	028BY074NV	028BY009NV	028BY020NV	028BY056NV	None
Potential production (lb/acre):								
Favorable years		800	800	600	500	500	450	
Normal years		600	600	400	400	300	325	
Unfavorable years		400	400	200	300	150	150	

740--UPATAD-PIOCHE-TARNACH ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		UPATAD	PIOCHE	TARNACH	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	X	---	---	---	---
Indian ricegrass	ORHY	X	X	10-20	10-20	10-20	---
Sandberg bluegrass	POSE	---	X	---	---	2-5	---
Thurber needlegrass	STTH2	X	X	---	---	---	---
basin wildrye	ELCI2	X	X	---	---	---	---
bluebunch wheatgrass	AGSP	X	X	20-40	20-40	---	---
bluegrass	POA++	X	---	2-5	---	---	---
bottlebrush squirreltail	SIHY	X	X	---	---	2-5	---
muttongrass	POPE	---	---	---	2-8	---	---
needleandthread	STCO4	---	---	2-5	2-5	10-20	---
arrowleaf balsamroot	BASA3	X	X	---	---	---	---
goldenweed	HAPLO2	---	---	2-5	---	---	---
tapertip hawksbeard	CRAC2	X	X	2-5	---	---	---
Stansbury cliffrose	COMES	X	---	---	---	---	---
antelope bitterbrush	PUTR2	X	X	---	---	---	---
black sagebrush	ARARN	X	---	25-35	20-30	35-45	---
curlleaf mountainmahogany	CELE3	X	---	---	---	---	---
ephedra	EPHED	---	X	---	---	---	---
mountain big sagebrush	ARVA2	---	X	---	---	---	---
serviceberry	AMELA	X	X	---	---	---	---
shadscale	ATCO	---	---	2-5	---	2-5	---
winterfat	EULA5	---	---	2-5	2-5	---	---
Utah juniper	JUOS	X	X	---	---	---	---
singleleaf pinyon	PIMO	X	X	---	---	---	---
Range site number		028BY060NV	028BY062NV	028BY008NV	028BY006NV	028BY016NV	None
Potential production (lb/acre):							
Favorable years		500	700	600	800	350	
Normal years		300	500	400	600	225	
Unfavorable years		250	300	200	400	100	

760--PLAYAS, 0 TO 1 PERCENT SLOPES

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions	
		Soil name or Inclusion number--	
		PLAYAS	Inclusion 1
alkali sacaton	SPAI	---	5-10
basin wildrye	ELCI2	---	2-5
inland saltgrass	DISPS2	---	2-8
black greasewood	SAVE4	---	60-75
rubber rabbitbrush	CHNA2	---	2-5
shadscale	ATCO	---	2-5
Range site number		None	028BY020NV
Potential production (lb/acre):			
Favorable years			500
Normal years			300
Unfavorable years			150

761--UMBERLAND ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		UMBERLAND	UMBERLAND	Inclusion 1	Inclusion 2
alkali sacaton	SPAI	---	15-40	---	15-40
basin wildrye	ELCI2	---	40-60	---	40-60
bluegrass	POA++	T-20	---	---	---
foxtail barley	HOJU	1-20	---	---	---
inland saltgrass	DISPS2	---	2-5	---	2-5
mat muhly	MURI	T-8	---	---	---
rush	JunCU	T-20	---	---	---
sedge	CAREX	T-20	---	---	---
western wheatgrass	AGSM	---	2-5	---	2-5
cinquefoil	POTEN	T-10	---	---	---
povertyweed	IVAX	T-20	---	---	---
black greasewood	SAVE4	---	5-15	---	5-15
rubber rabbitbrush	CHNA2	---	2-5	---	2-5
Range site number		028BY099NV	028BY004NV	None	028BY004NV
Potential production (lb/acre):					
Favorable years		1500	2200		2200
Normal years		400	1500		1500
Unfavorable years		0	800		800

762--UMBERLAND-PLAYAS ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		UMBERLAND	PLAYAS	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	---	---	2-5	---
alkali sacaton	SPAI	---	---	15-40	---	---
basin wildrye	ELCY2	---	---	40-60	---	---
bluegrass	POA++	T-20	---	---	---	---
bottlebrush squirreltail	SIHY	---	---	---	2-5	---
foxtail barley	HOJU	1-20	---	---	---	2-5
inland saltgrass	DISPS2	---	---	2-5	---	2-5
mat muhly	MURI	T-8	---	---	---	---
rush	JuncU	T-20	---	---	---	---
sedge	CAREX	T-20	---	---	---	---
western wheatgrass	AGSM	---	---	2-5	---	50-70
cinquefoil	POTEN	T-10	---	---	---	---
povertyweed	IVAX	T-20	---	---	---	---
black greasewood	SAVE4	---	---	5-15	20-30	2-5
bud sagebrush	ARSP5	---	---	---	2-10	---
fourwing saltbush	ATCA2	---	---	---	---	5-15
rubber rabbitbrush	CHNA2	---	---	2-5	---	---
shadscale	ATCO	---	---	---	20-50	---
Range site number		028BY098NV	None	028BY004NV	028BY074NV	028BY023NV
Potential production (lb/acre):						
Favorable years		1500		2200	600	1400
Normal years		400		1500	400	1000
Unfavorable years		0		800	200	700

763--EQUIS-UMBERLAND-DUFFER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		EQUIS	UMBERLAND	DUFFER	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Baltic rush	JUBA	---	---	2-8	---	---	---	---
alkali cordgrass	SPGR	---	---	10-15	---	---	---	---
alkali sacaton	SPA1	15-40	5-10	40-50	15-40	---	2-5	5-15
alkaligrass	PUCCI	---	---	2-5	---	---	---	---
basin wildrye	ELCI2	40-60	2-5	---	40-60	10-20	40-60	2-8
bluegrass	POA++	---	---	2-8	---	---	2-5	25-50
bottlebrush squirreltail	SIHY	---	---	---	---	2-5	---	---
inland saltgrass	DISPS2	2-5	2-8	2-5	2-5	2-10	---	---
mat muhly	MURI	---	---	---	---	---	---	30-40
sedge	CAREX	---	---	5-10	---	---	---	---
western wheatgrass	AGSM	2-5	---	---	2-5	---	5-10	2-8
basin big sagebrush	ARTRT	---	---	---	---	---	5-15	---
black greasewood	SAVE4	5-15	60-75	---	5-15	50-60	2-5	---
rubber rabbitbrush	CHNA2	2-5	2-5	---	2-5	---	2-5	---
shadscale	ATCO	---	2-5	---	---	---	---	---
Range site number		028BY004NV	028BY020NV	028BY002NV	028BY004NV	028BY069NV	028BY041NV	028BY100NV
Potential production (lb/acre):								
Favorable years		2200	500	1500	2200	800	1800	1500
Normal years		1500	300	1000	1500	600	1500	1100
Unfavorable years		800	150	700	800	400	1100	700

764--UMBERLAND-RUBYLAKE-ORUPA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		UMBERLAND	RUBYLAKE	ORUPA	Inclusion 1
Baltic rush	JUBA	---	2-5	---	---
alkali bluegrass	POJU	---	2-10	---	---
alkali muhly	MUAS	---	2-5	---	---
alkali sacaton	SPAI	15-40	2-10	5-10	---
basin wildrye	ELCI2	40-60	---	2-5	---
inland saltgrass	DISPS2	2-5	5-15	2-8	---
sedge	CAREX	---	10-20	---	---
western wheatgrass	AGSM	2-5	35-50	---	---
wildrye	ELYMU	---	5-15	---	---
black greasewood	SAVE4	5-15	---	60-75	---
rubber rabbitbrush	CHNA2	2-5	---	2-5	---
shadscale	ATCO	---	---	2-5	---
Range site number		028BY004NV	028BY012NV	028BY020NV	None
Potential production (lb/acre):					
Favorable years		2200	2000	500	
Normal years		1500	1500	300	
Unfavorable years		800	1000	150	

765--UMBERLAND-WENDANE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		UMBERLAND	UMBERLAND	WENDANE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Baltic rush	JUBA	---	---	---	2-8	---	---	---
alkali cordgrass	SPGR	---	---	---	10-15	---	---	---
alkali sacaton	SPAI	---	5-10	15-40	40-50	---	---	5-10
alkaligrass	PUCCI	---	---	---	2-5	---	---	---
basin wildrye	ELCI2	---	2-5	40-60	---	---	---	2-5
bluegrass	POA++	T-20	---	---	2-8	---	---	---
foxtail barley	HOJU	1-20	---	---	---	2-5	---	---
inland saltgrass	DISPS2	---	2-8	2-5	2-5	2-5	---	2-8
mat muhly	MURI	T-8	---	---	---	---	---	---
rush	JunCU	T-20	---	---	---	---	---	---
sedge	CAREX	T-20	---	---	5-10	---	---	---
western wheatgrass	AGSM	---	---	2-5	---	50-70	---	---
cinquefoil	POTEN	T-10	---	---	---	---	---	---
povertyweed	IVAX	T-20	---	---	---	---	---	---
black greasewood	SAVE4	---	60-75	5-15	---	2-5	---	60-75
fourwing saltbush	ATCA2	---	---	---	---	5-15	---	---
rubber rabbitbrush	CHNA2	---	2-5	2-5	---	---	---	2-5
shadscale	ATCO	---	2-5	---	---	---	---	2-5
Range site number		028BY098NV	028BY020NV	028BY004NV	028BY002NV	028BY023NV	None	028BY020NV
Potential production (lb/acre):								
Favorable years		1500	500	2200	1500	1400		500
Normal years		400	300	1500	1000	1000		300
Unfavorable years		0	150	800	700	700		150

767--UMBERLAND-ORUPA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		UMBERLAND	UMBERLAND	ORUPA	Inclusion 1	Inclusion 2
alkali sacaton	SPAI	5-10	---	5-10	15-40	---
basin wildrye	ELCI2	2-5	---	2-5	40-60	---
bluegrass	POA++	---	T-20	---	---	---
foxtail barley	HOJU	---	1-20	---	---	---
inland saltgrass	DISPS2	2-8	---	2-8	2-5	---
mat muhly	MURI	---	T-8	---	---	---
rush	JunCU	---	T-20	---	---	---
sedge	CAREX	---	T-20	---	---	---
western wheatgrass	AGSM	---	---	---	2-5	---
cinquefoil	POTEN	---	T-10	---	---	---
povertyweed	IVAX	---	T-20	---	---	---
black greasewood	SAVE4	60-75	---	60-75	5-15	---
rubber rabbitbrush	CHNA2	2-5	---	2-5	2-5	---
shadscale	ATCO	2-5	---	2-5	---	---
Range site number		028BY020NV	028BY098NV	028BY020NV	028BY004NV	None
Potential production (lb/acre):						
Favorable years		500	1500	500	2200	
Normal years		300	400	300	1500	
Unfavorable years		150	0	150	800	

781--MYSOL-BENIN-WENDANE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		MYSOL	BENIN	WENDANE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	2-5	---	---	2-10	---	2-8	1-5
alkali sacaton	SPAI	---	5-10	15-40	---	---	---	---
basin wildrye	ELCI2	---	2-5	40-60	10-20	---	---	---
bottlebrush squirreltail	SIHY	2-5	---	---	---	---	2-5	5-10
inland saltgrass	DISPS2	---	2-8	2-5	---	---	---	---
western wheatgrass	AGSM	---	---	2-5	---	---	5-15	---
big sagebrush	ARTR2	---	---	---	20-30	---	---	---
black greasewood	SAVE4	20-30	60-75	5-15	30-40	---	---	---
bud sagebrush	ARSP5	2-10	---	---	---	---	---	---
rubber rabbitbrush	CHNA2	---	2-5	2-5	2-5	---	---	---
shadscale	ATCO	20-50	2-5	---	---	---	2-5	85-90
sickle saltbush	ATPA	---	---	---	---	---	55-65	---
winterfat	EULA5	---	---	---	---	---	5-15	---
Range site number		028BY074NV	028BY020NV	028BY004NV	028BY028NV	None	028BY047NV	028BY073NV
Potential production (lb/acre):								
Favorable years		600	500	2200	800		500	400
Normal years		400	300	1500	600		350	300
Unfavorable years		200	150	800	400		200	200

800--MAZUMA-TOANO ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		MAZUMA	TOANO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	1-5	2-8	1-5	15-25	5-10	40-50
basin wildrye	ELCI2	---	---	---	---	10-20	---
bottlebrush squirreltail	SIHY	5-10	2-5	5-10	5-10	---	2-5
other perennial grasses	PPGG	---	---	---	2-5	---	---
thickspike wheatgrass	AGDA	---	---	---	---	5-10	---
western wheatgrass	AGSM	---	5-15	---	---	---	---
globemallow	SPHAE	---	---	---	2-5	---	1-5
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	---
bud sagebrush	ARSP5	---	---	---	2-8	---	---
fourwing saltbush	ATCA2	---	---	---	2-5	---	---
shadscale	ATCO	85-90	2-5	85-90	---	---	25-35
sickle saltbush	ATFA	---	55-65	---	---	---	---
winterfat	EULA5	---	5-15	---	40-50	---	5-10
Range site number		028BY073NV	028BY047NV	028BY073NV	028BY013NV	028BY045NV	028BY075NV
Potential production (lb/acre):							
Favorable years		400	500	400	700	1000	700
Normal years		300	350	300	500	800	500
Unfavorable years		200	200	200	350	600	300

801--MAZUMA-ZERK-OKAN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		MAZUMA	ZERK	OKAN	Inclusion 1	Inclusion 2
Indian ricegrass	ORRY	1-5	40-50	15-25	2-8	---
bottlebrush squirreltail	SBRY	5-10	2-5	2-5	2-5	5-10
needleandthread	STCO4	---	---	5-10	---	---
western wheatgrass	AGSM	---	---	---	5-15	2-5
globemallow	SPHAE	---	1-5	---	---	---
scarlet globemallow	SPCO	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	20-35	---	---
black greasewood	SAVE4	---	---	---	---	15-25
shadscale	ATCO	85-90	25-35	2-5	2-5	2-5
sickle saltbush	ATPA	---	---	---	55-65	50-60
spiny hopsage	GRSF	---	---	5-20	---	---
winterfat	EULAS	---	5-10	---	5-15	---
Range site number		028BY073NV	028BY075NV	028BY052NV	028BY047NV	028BY097NV
Potential production (lb/acre):						
Favorable years		400	700	800	500	500
Normal years		300	500	600	350	350
Unfavorable years		200	300	450	200	200

804--MAZUMA-KAWICH-PLAYAS ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		MAZUMA	KAWICH	PLAYAS	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	2-5	5-10	---	---	---	---	---
alkali sacaton	SPAI	---	---	---	---	---	---	5-10
basin wildrye	ELCI2	---	2-5	---	---	---	10-20	2-5
bottlebrush squirreltail	SIHY	2-5	---	---	---	---	2-5	---
inland saltgrass	DISPS2	---	---	---	75-95	20-30	2-10	2-8
thickspike wheatgrass	AGDA	---	2-5	---	---	---	---	---
black greasewood	SAVS4	20-30	40-60	---	---	---	50-60	60-75
bud sagebrush	ARSP5	2-10	---	---	---	---	---	---
fourwing saltbush	ATCA2	---	5-10	---	---	---	---	---
iodinebush	ALOC2	---	---	---	---	50-60	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	---	---	2-5
shadscale	ATCO	20-50	5-10	---	---	---	---	2-5
Range site number		028BY074NV	028BY021NV	None	028BY050NV	028AY009NV	028BY069NV	028BY020NV
Potential production (lb/acre):								
Favorable years		600	400		1200	150	800	500
Normal years		400	300		1000	100	600	300
Unfavorable years		200	200		800	75	400	150

807--MAZUMA-KUNZLER-ZERK ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or inclusion number--					
		MAZUMA	KUNZLER	ZERK	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	1-5	---	40-50	20-30	10-20	40-50
Sandberg bluegrass	POSE	---	5-10	---	2-5	---	---
bottlebrush squirreltail	SIHY	5-10	5-15	2-5	2-8	2-5	2-5
needleandthread	STCO4	---	---	---	10-20	---	---
globemallow	SPHAE	---	---	1-5	---	2-5	---
Wyoming big sagebrush	ARTRW	---	60-70	---	25-35	---	---
bud sagebrush	ARSP5	---	---	---	---	---	5-15
fourwing saltbush	ATCA2	---	---	---	---	15-30	---
rabbitbrush	CHRY89	---	---	---	2-5	---	---
shadscale	ATCO	85-90	---	25-35	---	---	---
spiny hopsage	GRSP	---	---	---	---	10-20	---
winterfat	EULA5	---	---	5-10	---	2-5	20-30
Range site number		028BY073NV	028BY056NV	028BY075NV	028BY010NV	028BY078NV	028BY084NV
Potential production (lb/acre):							
Favorable years		400	450	700	800	600	900
Normal years		300	325	500	600	500	700
Unfavorable years		200	150	300	400	400	400

823--KUNZLER-PYRAT-BLIMO ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		KUNZLER	PYRAT	BLIMO	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	2-10	20-30	20-30	10-20	2-5
Sandberg bluegrass	POSE	---	2-5	2-5	---	---
basin wildrye	ELCI2	10-20	---	---	---	---
bottlebrush squirreltail	SIHY	---	2-8	2-8	5-15	2-5
needleandthread	STCO4	---	10-20	10-20	---	---
Wyoming big sagebrush	ARTRW	---	25-35	25-35	---	---
big sagebrush	ARTR2	20-30	---	---	---	---
black greasewood	SAVE4	30-40	---	---	---	20-30
bud sagebrush	ARSP5	---	---	---	10-25	2-10
rabbitbrush	CHRY89	---	2-5	2-5	---	---
rubber rabbitbrush	CHNA2	2-5	---	---	---	---
shadscale	ATCO	---	---	---	40-50	20-50
Range site number		028BY028NV	028BY010NV	028BY010NV	028BY017NV	028BY074NV
Potential production (lb/acre):						
Favorable years		800	800	800	400	600
Normal years		600	600	600	300	400
Unfavorable years		400	400	400	200	200

824--KUNZLER-KATELANA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		KUNZLER	KATELANA	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	2-10	2-5	---	2-5
alkali sacaton	SPAI	---	---	15-40	---
basin wildrye	ELCI2	10-20	---	40-60	---
bottlebrush squirreltail	SIHY	---	2-5	---	2-5
inland saltgrass	DISPS2	---	---	2-5	---
western wheatgrass	AGSM	---	---	2-5	---
big sagebrush	ARTR2	20-30	---	---	---
black greasewood	SAVE4	30-40	20-30	5-15	20-30
bud sagebrush	ARSP5	---	2-10	---	2-10
rubber rabbitbrush	CRNA2	2-5	---	2-5	---
shadscale	ATCO	---	20-50	---	20-50
Range site number		028BY028NV	028BY074NV	028BY004NV	028BY074NV
Potential production (lb/acre):					
Favorable years		800	600	2200	600
Normal years		600	400	1500	400
Unfavorable years		400	200	800	200

827--KUNZLER-JAMES CANYON ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		KUNZLER	JAMES CANYON	JAMES CANYON	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	OREY	2-10	---	---	2-10	---	2-10
alkali sacaton	SPAI	---	5-15	20-30	---	5-10	---
basin wildrye	ELCI2	10-20	2-8	2-5	10-20	2-5	10-20
bluegrass	POA++	---	25-50	---	---	---	---
inland saltgrass	DISPS2	---	---	---	---	2-8	---
mat muhly	MURI	---	30-40	30-40	---	---	---
rush	JunCU	---	---	5-10	---	---	---
western wheatgrass	AGSM	---	2-8	---	---	---	---
aster	ASTER	---	---	2-5	---	---	---
Douglas rabbitbrush	CHVI8	---	---	1-5	---	---	---
basin big sagebrush	ARTRT	---	---	2-5	---	---	---
big sagebrush	ARTR2	20-30	---	---	20-30	---	20-30
black greasewood	SAVE4	30-40	---	1-5	30-40	60-75	30-40
rubber rabbitbrush	CHNA2	2-5	---	5-10	2-5	2-5	2-5
shadscale	ATCO	---	---	---	---	2-5	---
Range site number		028BY028NV	028BY100NV	028BY031NV	028BY028NV	028BY020NV	028BY028NV
Potential production (lb/acre):							
Favorable years		800	1500	1200	800	500	800
Normal years		600	1100	1000	600	300	600
Unfavorable years		400	700	400	400	150	400

S28--KUNZLER-PYRAT-WENDANE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		KUNZLER	PYRAT	WENDANE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Baltic rush	JUBA	---	---	---	---	---	2-8	---
Indian ricegrass	ORRY	2-10	20-30	---	---	20-35	---	20-30
Sandberg bluegrass	POSE	---	2-5	---	---	2-8	---	2-5
alkali cordgrass	SPGR	---	---	---	---	---	10-15	---
alkali sacaton	SPAI	---	---	15-40	---	---	40-50	---
alkaligrass	PUCCY	---	---	---	---	---	2-5	---
basin wildrye	ELCI2	10-20	---	40-60	2-5	---	---	---
bluegrass	POA++	---	---	---	25-40	---	2-8	---
bottlebrush squirreltail	SIHY	---	2-8	---	---	2-5	---	2-8
inland saltgrass	DISPS2	---	---	2-5	---	---	2-5	---
mat muhly	MURI	---	---	---	2-5	---	---	---
needleandthread	STCO4	---	10-20	---	---	5-15	---	10-20
rush	JuncU	---	---	---	5-15	---	---	---
sedge	CAREX	---	---	---	20-30	---	5-10	---
western wheatgrass	AGSM	---	---	2-5	---	---	---	---
cinquefoil	POTEN	---	---	---	2-5	---	---	---
groundsel	SENEC	---	---	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	---	---	25-35
big sagebrush	ARTR2	20-30	---	---	---	---	---	---
black greasewood	SAVE4	30-40	---	5-15	---	---	---	---
black sagebrush	ARARN	---	---	---	---	25-35	---	---
downy rabbitbrush	CHVIP4	---	---	---	---	2-5	---	---
rabbitbrush	CHRY99	---	2-5	---	---	---	---	2-5
rubber rabbitbrush	CHNA2	2-5	---	2-5	---	---	---	---
shadscale	ATCO	---	---	---	---	2-5	---	---
Range site number		028BY028NV	028BY010NV	028BY004NV	028BY001NV	028BY011NV	028BY002NV	028BY010NV
Potential production (lb/acre):								
Favorable years		800	800	2200	4000	600	1500	800
Normal years		600	600	1500	2000	450	1000	600
Unfavorable years		400	400	800	1200	250	700	400

830--PHARO-KZIN ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or inclusion number--				
		PHARO	KZIN	PHARO	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	10-20	X	10-20	2-5	10-20
Sandberg bluegrass	POSE	---	---	---	---	2-5
Thurber needlegrass	STTH2	---	X	---	30-40	---
basin wildrye	ELCI2	---	X	---	---	---
bluebunch wheatgrass	AGSP	20-40	X	20-40	15-30	---
bluegrass	POA++	---	X	---	2-8	---
bottlebrush squirreltail	SIHY	---	X	---	---	2-5
muttongrass	POFE	2-8	---	2-8	---	---
needleandthread	STCO4	2-5	---	2-5	2-8	10-20
arrowleaf balsamroot	BASA3	---	X	---	2-5	---
tapertip hawksbeard	CRAC2	---	X	---	2-5	---
Stansbury cliffrose	COMES	---	X	---	---	---
antelope bitterbrush	POTR2	---	X	---	2-10	---
big sagebrush	ARTR2	---	---	---	15-25	---
black sagebrush	ARARN	20-30	X	20-30	---	35-45
curleaf mountainmahogany	CELE3	---	X	---	---	---
serviceberry	AMELA	---	X	---	---	---
shadscale	ATCO	---	---	---	---	2-5
winterfat	EULA5	2-5	---	2-5	---	---
Utah juniper	JUOS	---	X	---	---	---
singleleaf pinyon	PIMO	---	X	---	---	---
Range site number		028BY006NV	028BY060NV	028BY006NV	028BY007NV	028BY016NV
Potential production (lb/acre):						
Favorable years		800	500	800	1000	350
Normal years		600	300	600	800	225
Unfavorable years		400	250	400	600	100

842--KATELANA-TIMPIE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		KATELANA	TIMPIE	Inclusion 1	Inclusion 2
Indian ricegrass	ORNY	1-5	5-15	2-5	20-30
bottlebrush squirreltail	SIHY	5-10	2-5	2-5	10-20
wheatgrass	AGROP2	---	20-30	---	---
globemallow	SPHAE	---	---	---	2-4
black greasewood	SAVE4	---	---	20-30	---
bud sagebrush	ARSP5	---	---	2-10	---
shadscale	ATCO	85-90	---	20-50	45-50
winterfat	EULA5	---	40-50	---	---
Range site number		028BY073NV	028BY071NV	028BY074NV	028BY009NV
Potential production (lb/acre):					
Favorable years		400	600	600	500
Normal years		300	400	400	400
Unfavorable years		200	200	200	300

843--KATELANA-KAWICH ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		KATELANA	KAWICH	Inclusion 1	Inclusion 2
Indian ricegrass	ORRY	1-5	5-10	---	2-5
Sandberg bluegrass	POSE	---	---	5-10	---
basin wildrye	ELCI2	---	2-5	---	---
bottlebrush squirreltail	SIHY	5-10	---	5-15	2-5
thickspike wheatgrass	AGDA	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	60-70	---
black greasewood	SAVE4	---	40-60	---	20-30
bud sagebrush	ARSP5	---	---	---	2-10
fourwing saltbush	ATCA2	---	5-10	---	---
shadscale	ATCO	85-90	5-10	---	20-50
Range site number		028BY073NV	028BY021NV	028BY056NV	028BY074NV
Potential production (lb/acre):					
Favorable years		400	400	450	600
Normal years		300	300	325	400
Unfavorable years		200	200	150	200

845--KATELANA-RAGTOWN-TIMPIE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		KATELANA	RAGTOWN	TIMPIE	Inclusion 1	Inclusion 2
Indian ricegrass	ORRY	1-5	2-8	5-15	20-30	2-5
bottlebrush squirreltail	SIHY	5-10	2-5	2-5	10-20	2-5
western wheatgrass	AGSM	---	5-15	---	---	---
wheatgrass	AGROP2	---	---	20-30	---	---
globemallow	SPHAE	---	---	---	2-4	---
black greasewood	SAVE4	---	---	---	---	20-30
bud sagebrush	ARSP5	---	---	---	---	2-10
shadscale	ATCO	85-90	2-5	---	45-50	20-50
sickle saltbush	ATFA	---	55-65	---	---	---
winterfat	EULAS	---	5-15	40-50	---	---
Range site number		028BY073NV	028BY047NV	028BY071NV	028BY009NV	028BY074NV
Potential production (lb/acre):						
Favorable years		400	500	600	500	600
Normal years		300	350	400	400	400
Unfavorable years		200	200	200	300	200

847--MAZUMA-BLIMO-WINTERMUTE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		MAZUMA	BLIMO	WINTERMUTE	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	1-5	20-30	40-50	2-8	15-25	10-20
Sandberg bluegrass	POSE	---	2-5	---	---	---	---
bottlebrush squirreltail	SIHY	5-10	2-8	2-5	2-5	5-10	5-15
needleandthread	STCO4	---	10-20	---	---	---	---
other perennial grasses	PPGG	---	---	---	---	2-5	---
western wheatgrass	AGSM	---	---	---	5-15	---	---
globemallow	SPHAE	---	---	1-5	---	2-5	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	---	---
bud sagebrush	ARSP5	---	---	---	---	2-8	10-25
fourwing saltbush	ATCA2	---	---	---	---	2-5	---
rabbitbrush	CHRY9	---	2-5	---	---	---	---
shadscale	ATCO	85-90	---	25-35	2-5	---	40-50
sickle saltbush	ATPA	---	---	---	55-65	---	---
winterfat	EULAS	---	---	5-10	5-15	40-50	---
Range site number		028BY073NV	028BY010NV	028BY075NV	028BY047NV	028BY013NV	028BY017NV
Potential production (lb/acre):							
Favorable years		400	800	700	500	700	400
Normal years		300	600	500	350	500	300
Unfavorable years		200	400	300	200	350	200

850--PALINOR-WINTERMUTE-OKAN ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		PALINOR	WINTERMUTE	OKAN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-35	40-50	15-25	20-35	40-50	X	10-20
Sandberg bluegrass	POSE	2-8	---	---	2-8	---	---	---
Thurber needlegrass	STTH2	---	---	---	---	---	X	---
basin wildrye	ELCI2	---	---	---	---	---	X	---
bluebunch wheatgrass	AGSP	---	---	---	---	---	X	20-40
bluegrass	POA++	---	---	---	---	---	X	2-5
bottlebrush squirreltail	SIRY	2-5	2-5	2-5	2-5	2-5	X	---
needleandthread	STCO4	5-15	---	5-10	5-15	---	---	2-5
arrowleaf balsamroot	BASA3	---	---	---	---	---	X	---
globemallow	SPHAE	---	1-5	---	---	---	---	---
goldenweed	HAPLO2	---	---	---	---	---	---	2-5
scarlet globemallow	SPCO	---	---	2-5	---	---	---	---
tapertip hawksbeard	CRAC2	---	---	---	---	---	X	2-5
Stansbury cliffrose	COMES	---	---	---	---	---	X	---
Wyoming big sagebrush	ARTRW	---	---	20-35	---	---	---	---
antelope bitterbrush	PTR2	---	---	---	---	---	X	---
black sagebrush	ARARN	25-35	---	---	25-35	---	X	25-35
bud sagebrush	ARSP5	---	---	---	---	5-15	---	---
curlleaf mountainmahogany	CLE3	---	---	---	---	---	X	---
downy rabbitbrush	CHVIP4	2-5	---	---	2-5	---	---	---
serviceberry	AMELA	---	---	---	---	---	X	---
shadscale	ATCO	2-5	25-35	2-5	2-5	---	---	2-5
spiny hopsage	GRSP	---	---	5-20	---	---	---	---
winterfat	EULA5	---	5-10	---	---	20-30	---	2-5
Utah juniper	JUOS	---	---	---	---	---	X	---
singleleaf pinyon	PIMO	---	---	---	---	---	X	---
Range site number		028BY011NV	028BY075NV	028BY052NV	028BY011NV	028BY084NV	028BY060NV	028BY008NV
Potential production (lb/acre):								
Favorable years		600	700	800	600	900	500	600
Normal years		450	500	600	450	700	300	400
Unfavorable years		250	300	450	250	400	250	200

851--PALINOR-ZIMBOB-TECOMar ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		PALINOR	ZIMBOB	TECOMar	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	20-35	15-25	10-20	40-50	---	15-25	2-5
Sandberg bluegrass	POSE	2-8	2-5	---	---	---	---	---
Scribner needlegrass	STSC2	---	2-5	---	---	---	---	---
Thurber needlegrass	STTH2	---	---	---	---	---	---	30-40
bluebunch wheatgrass	AGSP	---	2-5	20-40	---	---	---	15-30
bluegrass	POA++	---	---	2-5	---	---	---	2-8
bottlebrush squirreltail	SIRY	2-5	2-5	---	2-5	---	2-5	---
needleandthread	STCO4	5-15	---	2-5	---	---	5-10	2-8
arrowleaf balsamroot	BASA3	---	---	---	---	---	---	2-5
globemallow	SPRAE	---	---	---	1-5	---	---	---
goldenweed	HAPLO2	---	---	2-5	---	---	---	---
scarlet globemallow	SPCO	---	---	---	---	---	2-5	---
tapertip hawkbeard	CRAC2	---	---	2-5	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	---	---	---	20-35	---
antelope bitterbrush	POTR2	---	---	---	---	---	---	2-10
big sagebrush	ARTR2	---	---	---	---	---	---	15-25
black sagebrush	ARARN	25-35	30-35	25-35	---	---	---	---
downy rabbitbrush	CHVIP4	2-5	---	---	---	---	---	---
shadscale	ATCO	2-5	---	2-5	25-35	---	2-5	---
spiny hopsage	GRSP	---	---	---	---	---	5-20	---
winterfat	EULAS	---	---	2-5	5-10	---	---	---
Range site number		028BY011NV	028BY059NV	028BY008NV	028BY075NV	None	028BY052NV	028BY007NV
Potential production (lb/acre):								
Favorable years		600	400	600	700		800	1000
Normal years		450	350	400	500		600	800
Unfavorable years		250	125	200	300		450	600

852--PALINOR-PYRAT-SHABLISS ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		PALINOR	PYRAT	SHABLISS	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-35	20-30	20-30	5-10	X	10-20	5-15
Sandberg bluegrass	POSE	2-8	2-5	2-5	---	---	---	---
basin wildrye	ELCI2	---	---	---	10-20	X	---	2-5
bluebunch wheatgrass	AGSP	---	---	---	---	---	20-40	30-50
bluegrass	POA++	---	---	---	---	X	---	2-8
bottlebrush squirreltail	SIHY	2-5	2-8	2-5	---	X	---	---
muttongrass	POSE	---	---	---	---	---	2-8	---
needleandthread	STCO4	5-15	10-20	10-20	---	X	2-5	2-5
thickspike wheatgrass	AGDA	---	---	---	5-10	---	---	---
thickstem wildcabbage	CACR11	---	---	---	---	X	---	---
Utah juniper	JUOS	---	---	---	---	X	---	---
Wyoming big sagebrush	ARTRW	---	25-35	25-35	25-35	---	---	---
antelope bitterbrush	PUTR2	---	---	---	---	X	---	---
big sagebrush	ARTR2	---	---	---	---	---	---	20-30
black sagebrush	ARARN	25-35	---	---	---	X	20-30	---
downy rabbitbrush	CHVIP4	2-5	---	---	---	---	---	---
rabbitbrush	CHRYSS9	---	2-5	---	---	---	---	---
shadscale	ATCO	2-5	---	---	---	---	---	---
winterfat	EULA5	---	---	---	---	---	2-5	---
Range site number		028BY011NV	028BY010NV	028BY080NV	028BY045NV	028BY083NV	028BY006NV	028BY094NV
Potential production (lb/acre):								
Favorable years		600	800	600	1000	300	800	800
Normal years		450	600	400	800	200	600	600
Unfavorable years		250	400	200	600	125	400	400

854--PALINOR-AUTOMAL-SHABLISS ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		PALINOR	AUTOMAL	SHABLISS	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	20-35	20-35	20-30	5-10	40-50
Sandberg bluegrass	POSE	2-8	2-8	2-5	---	---
basin wildrye	ELCI2	---	---	---	10-20	---
bottlebrush squirreltail	SIHY	2-5	2-5	2-8	---	2-5
needleandthread	STCO4	5-15	5-15	10-20	---	---
thickspike wheatgrass	AGDA	---	---	---	5-10	---
globemallow	SPHA6	---	---	---	---	1-5
Wyoming big sagebrush	ARTRW	---	---	25-35	25-35	---
black sagebrush	ARARN	25-35	25-35	---	---	---
downy rabbitbrush	CHVIP4	2-5	2-5	---	---	---
rabbitbrush	CHRY99	---	---	2-5	---	---
shadscale	ATCO	2-5	2-5	---	---	25-35
winterfat	EULA5	---	---	---	---	5-10
Range site number		028BY011NV	028BY011NV	028BY010NV	028BY045NV	028BY075NV
Potential production (lb/acre):						
Favorable years		600	600	800	1000	700
Normal years		450	450	600	800	500
Unfavorable years		250	250	400	600	300

856--PALINOR-PARISA ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or inclusion number--				
		PALINOR	PARISA	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	20-35	20-30	X	5-15	10-20
Sandberg bluegrass	POSE	2-8	2-5	---	---	---
Thurber needlegrass	STH2	---	---	X	---	---
basin wildrye	ELCI2	---	---	X	2-5	---
bluebunch wheatgrass	AGSP	---	---	X	30-50	20-40
bluegrass	POA++	---	---	X	2-8	---
bottlebrush squirreltail	SIHY	2-5	2-8	X	---	---
muttongrass	POFE	---	---	---	---	2-8
needleandthread	STCO4	5-15	10-20	---	2-5	2-5
arrowleaf balsamroot	BASA3	---	---	X	---	---
tapertip hawksbeard	CRAC2	---	---	X	---	---
Stansbury cliffrose	COMES	---	---	X	---	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	---
antelope bitterbrush	PUTR2	---	---	X	---	---
big sagebrush	ARTR2	---	---	---	20-30	---
black sagebrush	ARARN	25-35	---	X	---	20-30
curlleaf mountainmahogany	CELE3	---	---	X	---	---
downy rabbitbrush	CHVIP4	2-5	---	---	---	---
rabbitbrush	CHYIS9	---	2-5	---	---	---
serviceberry	AMELA	---	---	X	---	---
shadscale	ATCO	2-5	---	---	---	---
winterfat	EULA5	---	---	---	---	2-5
Utah juniper	JUOS	---	---	X	---	---
singleleaf pinyon	PIMO	---	---	X	---	---
Range site number		028BY011NV	028BY010NV	028BY060NV	028BY094NV	028BY006NV
Potential production (lb/acre):						
Favorable years		600	800	500	800	800
Normal years		450	600	300	600	600
Unfavorable years		250	400	250	400	400

857--PALINOR-SHABLISS-LINOYER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		PALINOR	SHABLISS	LINOYER	Inclusion 1	Inclusion 2
Indian ricegrass	ORRY	20-35	20-30	15-25	20-35	20-30
Sandberg bluegrass	POSE	2-8	2-5	---	2-8	2-5
bottlebrush squirreltail	SIHY	2-5	2-8	5-10	2-5	2-8
needleandthread	STCO4	5-15	10-20	---	5-15	10-20
other perennial grasses	PPGG	---	---	2-5	---	---
globemallow	SPHAE	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	25-35	---	---	25-35
black sagebrush	ARARN	25-35	---	---	25-35	---
bud sagebrush	ARSP5	---	---	2-8	---	---
downy rabbitbrush	CHVIP4	2-5	---	---	2-5	---
fourwing saltbush	ATCA2	---	---	2-5	---	---
rabbitbrush	CHRY9	---	2-5	---	---	2-5
shadscale	ATCO	2-5	---	---	2-5	---
winterfat	EULA5	---	---	40-50	---	---
Range site number		028BY011NV	028BY010NV	028BY013NV	028BY011NV	028BY010NV
Potential production (lb/acre):						
Favorable years		600	800	700	600	800
Normal years		450	600	500	450	600
Unfavorable years		250	400	350	250	400

858--PALINOR-AUTOMAL-LINOYER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		PALINOR	AUTOMAL	LINOYER	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	20-35	20-35	15-25	20-30	20-30
Sandberg bluegrass	POSE	2-8	2-8	---	2-5	2-5
bottlebrush squirreltail	SIHY	2-5	2-5	5-10	2-8	2-8
needleandthread	STCO4	5-15	5-15	---	10-20	10-20
other perennial grasses	PPGG	---	---	2-5	---	---
globemallow	SPHAE	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	25-35
black sagebrush	ARARN	25-35	25-35	---	---	---
bud sagebrush	ARSP5	---	---	2-8	---	---
downy rabbitbrush	CHVIP4	2-5	2-5	---	---	---
fourwing saltbush	ATCA2	---	---	2-5	---	---
rabbitbrush	CHRY99	---	---	---	2-5	2-5
shadscale	ATCO	2-5	2-5	---	---	---
winterfat	EULA5	---	---	40-50	---	---
Range site number		028BY011NV	028BY011NV	028BY013NV	028BY010NV	028BY010NV
Potential production (lb/acre):						
Favorable years		600	600	700	800	800
Normal years		450	450	500	600	600
Unfavorable years		250	250	350	400	400

870--THERIOT-ZIMBOB ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		THERIOT	ZIMBOB	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	10-25	10-20	---	10-20	15-25
Sandberg bluegrass	POSE	---	2-5	---	---	2-5
Scribner needlegrass	STSC2	---	---	---	---	2-5
bluebunch wheatgrass	AGSP	---	---	---	20-40	2-5
bluegrass	POA++	---	---	---	2-5	---
bottlebrush squirreltail	SIHY	2-5	2-5	---	---	2-5
galleta	HIJA	2-8	---	---	---	---
needleandthread	STCO4	2-10	10-20	---	2-5	---
goldenweed	HAPLO2	---	---	---	2-5	---
tapertip hawksbeard	CRAC2	---	---	---	2-5	---
black sagebrush	ARARN	---	35-45	---	25-35	30-35
bud sagebrush	ARSP5	2-10	---	---	---	---
shadscale	ATCO	15-25	2-5	---	2-5	---
winterfat	EULA5	2-5	---	---	2-5	---
Range site number		028AY003NV	028BY016NV	None	028BY008NV	028BY059NV
Potential production (lb/acre):						
Favorable years		250	350		600	400
Normal years		150	225		400	350
Unfavorable years		75	100		200	125

880--DUFFER, DRAINED-DUFFER-KOLDA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		DUFFER	DUFFER	KOLDA	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Baltic rush	JUBA	---	2-8	---	---	---	---	---
Indian ricegrass	OREY	---	---	---	2-5	2-10	---	40-50
alkali cordgrass	SPGR	---	10-15	---	---	---	---	---
alkali salsola	SPAI	15-40	40-50	---	---	---	5-10	---
alkaligrass	PUCCI	---	2-5	---	---	---	---	---
basin wildrye	ELCI2	40-60	---	2-5	---	10-20	2-5	---
bluegrass	POA++	---	2-8	25-40	---	---	---	---
bottlebrush squirreltail	SIHY	---	---	---	2-5	---	---	2-5
inland saltgrass	DISPS2	2-5	2-5	---	---	---	2-8	---
mat muhly	MURI	---	---	2-5	---	---	---	---
rush	JunCU	---	---	5-15	---	---	---	---
sedge	CAREX	---	5-10	20-30	---	---	---	---
western wheatgrass	AGSM	2-5	---	---	---	---	---	---
cinquefoil	POTEN	---	---	2-5	---	---	---	---
groundsel	SENEC	---	---	2-5	---	---	---	---
big sagebrush	ARTR2	---	---	---	---	20-30	---	---
black greasewood	SAVE4	5-15	---	---	20-30	30-40	60-75	---
bud sagebrush	ARSP5	---	---	---	2-10	---	---	5-15
rubber rabbitbrush	CHNA2	2-5	---	---	---	2-5	2-5	---
shadscale	ATCO	---	---	---	20-50	---	2-5	---
winterfat	EULA5	---	---	---	---	---	---	20-30
Range site number		028BY004NV	028BY002NV	028BY001NV	028BY074NV	028BY028NV	028BY020NV	028BY064NV
Potential production (lb/acre):								
Favorable years		2200	1500	4000	600	800	500	900
Normal years		1500	1000	2000	400	600	300	700
Unfavorable years		800	700	1200	200	400	150	400

881--DUFFER-KUNZLER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		DUFFER	KUNZLER	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Baltic rush	JUBA	---	---	---	---	2-8	---
Indian ricegrass	ORHY	---	2-10	---	2-5	---	---
alkali cordgrass	SPGR	---	---	---	---	10-15	---
alkali sacaton	SPAI	15-40	---	---	---	40-50	5-10
alkaligrass	PUCCI	---	---	---	---	2-5	---
basin wildrye	ELCI2	40-60	10-20	2-5	---	---	2-5
bluegrass	POA++	---	---	25-40	---	2-8	---
bottlebrush squirreltail	SIHY	---	---	---	2-5	---	---
inland saltgrass	DISPS2	2-5	---	---	---	2-5	2-8
mat muhly	MURI	---	---	2-5	---	---	---
rush	JunCU	---	---	5-15	---	---	---
sedge	CAREX	---	---	20-30	---	5-10	---
western wheatgrass	AGSM	2-5	---	---	---	---	---
cinquefoil	POTEN	---	---	2-5	---	---	---
groundsel	SENEC	---	---	2-5	---	---	---
big sagebrush	ARTR2	---	20-30	---	---	---	---
black greasewood	SAVE4	5-15	30-40	---	20-30	---	60-75
bud sagebrush	ARSP5	---	---	---	2-10	---	---
rubber rabbitbrush	CHNA2	2-5	2-5	---	---	---	2-5
shadscale	ATCO	---	---	---	20-50	---	2-5
Range site number		028BY004NV	028BY028NV	028BY001NV	028BY074NV	028BY002NV	028BY020NV
Potential production (lb/acre):							
Favorable years		2200	800	4000	600	1500	500
Normal years		1500	600	2000	400	1000	300
Unfavorable years		800	400	1200	200	700	150

882--DUFFER-KOLDA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or inclusion number--				
		DUFFER	KOLDA	Inclusion 1	Inclusion 2	Inclusion 3
Baltic rush	JUBA	2-8	---	---	---	---
Indian ricegrass	ORRY	---	---	2-10	2-5	---
alkali cordgrass	SPGR	10-15	---	---	---	---
alkali sacaton	SPAI	40-50	---	---	---	15-40
alkaligrass	PUCCI	2-5	---	---	---	---
basin wildrye	ELCI2	---	2-5	10-20	---	40-60
bluegrass	POA++	2-8	25-40	---	---	---
bottlebrush squirreltail	SIHY	---	---	---	2-5	---
inland saltgrass	DISPS2	2-5	---	---	---	2-5
mat muhly	MURI	---	2-5	---	---	---
rush	JunCU	---	5-15	---	---	---
sedge	CAREX	5-10	20-30	---	---	---
western wheatgrass	AGSM	---	---	---	---	2-5
cinquefoil	POTEN	---	2-5	---	---	---
groundsel	SENEC	---	2-5	---	---	---
big sagebrush	ARTR2	---	---	20-30	---	---
black greasewood	SAVE4	---	---	30-40	20-30	5-15
bud sagebrush	ARSP5	---	---	---	2-10	---
rubber rabbitbrush	CHNA2	---	---	2-5	---	2-5
shadscale	ATCO	---	---	---	20-50	---
Range site number		028BY002NV	028BY001NV	028BY028NV	028BY074NV	028BY004NV
Potential production (lb/acre):						
Favorable years		1500	4000	800	600	2200
Normal years		1000	2000	600	400	1500
Unfavorable years		700	1200	400	200	800

894--ZERK-THREESSEE-MAZUMA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		ZERK	THREESSEE	MAZUMA	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	40-50	20-30	20-30	---	15-25	15-25
Sandberg bluegrass	POSE	---	2-5	---	5-10	---	---
bottlebrush squirreltail	SIHY	2-5	2-8	10-20	5-15	5-10	---
needleandthread	STCO4	---	10-20	---	---	---	15-25
other perennial grasses	PPGG	---	---	---	---	2-5	---
thickspike wheatgrass	AGDA	---	---	---	---	---	5-15
globemallow	SPRAE	1-5	---	2-4	---	2-5	---
Wyoming big sagebrush	ARTRW	---	25-35	---	60-70	---	---
big sagebrush	ARTR2	---	---	---	---	---	15-25
bud sagebrush	ARSP5	---	---	---	---	2-8	---
fourwing saltbush	ATCA2	---	---	---	---	2-5	2-8
rabbitbrush	CHRY89	---	2-5	---	---	---	2-5
shadscale	ATCO	25-35	---	45-50	---	---	---
winterfat	EULA5	5-10	---	---	---	40-50	2-5
Range site number		028BY075NV	028BY010NV	028BY009NV	028BY056NV	028BY013NV	028BY005NV
Potential production (lb/acre):							
Favorable years		700	800	500	450	700	800
Normal years		500	600	400	325	500	600
Unfavorable years		300	400	300	150	350	400

900--ZERK-AUTOMAL-LINOYER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		ZERK	AUTOMAL	LINOYER	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	40-50	20-35	15-25	40-50	1-5	20-30	15-25
Sandberg bluegrass	POSE	---	2-8	---	---	---	2-5	---
bottlebrush squirreltail	SIHY	2-5	2-5	5-10	2-5	5-10	2-8	2-5
needleandthread	STCO4	---	5-15	---	---	---	10-20	5-10
other perennial grasses	PPGG	---	---	2-5	---	---	---	---
globemallow	SPHAE	---	---	2-5	1-5	---	---	---
scarlet globemallow	SPCO	---	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	---	---	---	---	---	25-35	20-35
black sagebrush	ARARN	---	25-35	---	---	---	---	---
bud sagebrush	ARSP5	5-15	---	2-8	---	---	---	---
downy rabbitbrush	CHVIP4	---	2-5	---	---	---	---	---
fourwing saltbush	ATCA2	---	---	2-5	---	---	---	---
rabbitbrush	CHRY89	---	---	---	---	---	2-5	---
shadscale	ATCO	---	2-5	---	25-35	85-90	---	2-5
spiny hopsage	GRSP	---	---	---	---	---	---	5-20
winterfat	EULAS	20-30	---	40-50	5-10	---	---	---
Range site number		028BY084NV	028BY011NV	028BY013NV	028BY075NV	028BY073NV	028BY010NV	028BY052NV
Potential production (lb/acre):								
Favorable years		900	600	700	700	400	800	800
Normal years		700	450	500	500	300	600	600
Unfavorable years		400	250	350	300	200	400	450

910--RAGTOWN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions		
		Soil name or Inclusion number--		
		RAGTOWN	RAGTOWN	Inclusion 1
Indian ricegrass	ORHY	---	2-8	1-5
bottlebrush squirreltail	SIHY	5-10	2-5	5-10
western wheatgrass	AGSM	2-5	5-15	---
black greasewood	SAVE4	15-25	---	---
shadscale	ATCO	2-5	2-5	85-90
sickle saltbush	ATFA	50-60	55-65	---
winterfat	EULA5	---	5-15	---
Range site number		028BY097NV	028BY047NV	028BY073NV
Potential production (lb/acre):				
Favorable years		500	500	400
Normal years		350	350	300
Unfavorable years		200	200	200

912--KATELANA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		KATELANA	KATELANA	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	2-5	1-5	5-15	5-10	---	---
basin wildrye	ELCI2	---	---	---	2-5	---	---
bottlebrush squirreltail	SIHY	2-5	5-10	2-5	---	5-10	---
thickspike wheatgrass	AGDA	---	---	---	2-5	---	---
western wheatgrass	AGSM	---	---	---	---	2-5	---
wheatgrass	AGROP2	---	---	20-30	---	---	---
black greasewood	SAVE4	20-30	---	---	40-60	15-25	---
bud sagebrush	ARSP5	2-10	---	---	---	---	---
fourwing saltbush	ATCA2	---	---	---	5-10	---	---
shadscale	ATCO	20-50	85-90	---	5-10	2-5	---
sickle saltbush	ATPA	---	---	---	---	50-60	---
winterfat	EULA5	---	---	40-50	---	---	---
Range site number		028BY074NV	028BY073NV	028BY071NV	028BY021NV	028BY097NV	None
Potential production (lb/acre):							
Favorable years		600	400	600	400	500	
Normal years		400	300	400	300	350	
Unfavorable years		200	200	200	200	200	

914--KATELANA-BENIN-SHEFFIT ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or inclusion number--					
		KATELANA	BENIN	SHEFFIT	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	2-5	---	2-10	5-10	---	5-15
alkali sacaton	SPAI	---	5-10	---	---	---	---
basin wildrye	ELCI2	---	2-5	10-20	2-5	---	---
bottlebrush squirreltail	SIHY	2-5	---	---	---	---	2-5
inland saltgrass	DISPS2	---	2-8	---	---	---	---
thickspike wheatgrass	AGDA	---	---	---	2-5	---	---
wheatgrass	AGROP2	---	---	---	---	---	20-30
big sagebrush	ARTR2	---	---	20-30	---	---	---
black greasewood	SAVE4	20-30	60-75	30-40	40-60	---	---
bud sagebrush	ARSP5	2-10	---	---	---	---	---
fourwing saltbush	ATCA2	---	---	---	5-10	---	---
rubber rabbitbrush	CHNA2	---	2-5	2-5	---	---	---
shadscale	ATCO	20-50	2-5	---	5-10	---	---
winterfat	EULA5	---	---	---	---	---	40-50
Range site number		028BY074NV	028BY020NV	028BY028NV	028BY021NV	None	028BY071NV
Potential production (lb/acre):							
Favorable years		600	500	800	400		600
Normal years		400	300	600	300		400
Unfavorable years		200	150	400	200		200

917--KATELANA-SHEFFIT-RAGTOWN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		KATELANA	SHEFFIT	RAGTOWN	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORRY	2-5	2-10	---	1-5	2-8	---
basin wildrye	ELCI2	---	10-20	---	---	---	---
bottlebrush squirreltail	SIHY	2-5	---	5-10	5-10	2-5	---
western wheatgrass	AGSM	---	---	2-5	---	5-15	---
big sagebrush	ARTR2	---	20-30	---	---	---	---
black greasewood	SAVE4	20-30	30-40	15-25	---	---	---
bud sagebrush	ARSP5	2-10	---	---	---	---	---
rubber rabbitbrush	CHNA2	---	2-5	---	---	---	---
shadscale	ATCO	20-50	---	2-5	85-90	2-5	---
sickle saltbush	ATFA	---	---	50-60	---	55-65	---
winterfat	EULA5	---	---	---	---	5-15	---
Range site number		028BY074NV	028BY028NV	028BY097NV	028BY073NV	028BY047NV	None
Potential production (lb/acre):							
Favorable years		600	800	500	400	500	
Normal years		400	600	350	300	350	
Unfavorable years		200	400	200	200	200	

918--KATELANA-ZORRAVISTA-PLAYAS ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		KATELANA	ZORRAVISTA	PLAYAS	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	2-5	10-25	---	2-10	---	2-8	---
alkali sacaton	SPAI	---	---	---	---	---	---	15-40
basin wildrye	ELCI2	---	---	---	10-20	---	---	40-60
bottlebrush squirreltail	SIHY	2-5	---	---	---	5-10	2-5	---
inland saltgrass	DISP82	---	---	---	---	---	---	2-5
needleandthread	STCO4	---	2-5	---	---	---	---	---
other perennial grasses	PPGG	---	2-8	---	---	---	---	---
thickspike wheatgrass	AGDA	---	5-15	---	---	---	---	---
western wheatgrass	AGSM	---	---	---	---	2-5	5-15	2-5
big sagebrush	ARTR2	---	30-40	---	20-30	---	---	---
black greasewood	SAVE4	20-30	---	---	30-40	15-25	---	5-15
bud sagebrush	ARSP5	2-10	---	---	---	---	---	---
fourwing saltbush	ATCA2	---	5-15	---	---	---	---	---
rubber rabbitbrush	CHNA2	---	2-5	---	2-5	---	---	2-5
shadscale	ATCO	20-50	---	---	---	2-5	2-5	---
sickle saltbush	ATFA	---	---	---	---	50-60	55-65	---
spiny hopsage	GRSP	---	5-10	---	---	---	---	---
winterfat	EULA5	---	---	---	---	---	5-15	---
Range site number		028BY074NV	028BY068NV	None	028BY028NV	028BY097NV	028BY047NV	028BY004NV
Potential production (lb/acre):								
Favorable years		600	800		800	500	500	2200
Normal years		400	500		600	350	350	1500
Unfavorable years		200	300		400	200	200	800

930--OKAN-TOANO-LORAY ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or inclusion number--						
		OKAN	TOANO	LORAY	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	15-25	2-8	15-25	15-25	15-25	20-35	---
King desertgrass	BLKI	---	---	2-5	---	---	---	---
Sandberg bluegrass	POSE	---	---	---	---	---	2-8	---
bottlebrush squirreltail	SIHY	2-5	2-5	---	5-10	2-5	2-5	---
galleta	HIJA	---	---	2-8	---	---	---	---
needleandthread	STCO4	5-10	---	---	---	5-10	5-15	---
other perennial grasses	PPGG	---	---	---	2-5	---	---	---
western wheatgrass	AGSM	---	5-15	---	---	---	---	---
globemallow	SPHA5	---	---	2-5	2-5	---	---	---
scarlet globemallow	SPCO	2-5	---	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	20-35	---	---	---	20-35	---	---
black sagebrush	ARARN	---	---	---	---	---	25-35	---
bud sagebrush	ARSP5	---	---	5-10	2-8	---	---	---
downy rabbitbrush	CHVIP4	---	---	---	---	---	2-5	---
fourwing saltbush	ATCA2	---	---	---	2-5	---	---	---
gray molly kochia	KOAMV	---	---	2-5	---	---	---	---
shadscale	ATCO	2-5	2-5	40-50	---	2-5	2-5	---
sickle saltbush	ATFA	---	55-65	---	---	---	---	---
spiny hopsage	GRSP	5-20	---	---	---	5-20	---	---
winterfat	EULA5	---	5-15	2-8	40-50	---	---	---
Range site number		028BY052NV	028BY047NV	028AY012NV	028BY013NV	028BY052NV	028BY011NV	None
Potential production (lb/acre):								
Favorable years		800	500	500	700	800	600	
Normal years		600	350	300	500	600	450	
Unfavorable years		450	200	200	350	450	250	

932--OKAN-PYRAT ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or inclusion number--					
		OKAN	PYRAT	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	20-30	20-30	15-25	15-25	15-25	2-10
Sandberg bluegrass	POSE	2-5	2-5	---	---	---	---
basin wildrye	ELCI2	---	---	---	---	---	10-20
bottlebrush squirreltail	SIHY	2-8	2-8	2-5	---	2-5	---
needleandthread	STCO4	10-20	10-20	5-10	15-25	5-10	---
thickspike wheatgrass	AGDA	---	---	---	5-15	---	---
scarlet globemallow	SPCO	---	---	2-5	---	2-5	---
Wyoming big sagebrush	ARTRW	25-35	25-35	20-35	---	20-35	---
big sagebrush	ARTR2	---	---	---	15-25	---	20-30
black greasewood	SAVE4	---	---	---	---	---	30-40
fourwing saltbush	ATCA2	---	---	---	2-8	---	---
rabbitbrush	CHRY59	2-5	2-5	---	2-5	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	---	2-5
shadscale	ATCO	---	---	2-5	---	2-5	---
spiny hopsage	GRSP	---	---	5-20	---	5-20	---
winterfat	EULA5	---	---	---	2-5	---	---
Range site number		028BY010NV	028BY010NV	028BY052NV	028BY005NV	028BY052NV	028BY028NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	800
Normal years		600	600	600	600	600	600
Unfavorable years		400	400	450	400	450	400

941--SHEFFIT-ZORRAVISTA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or inclusion number--				
		SHEFFIT	SHEFFIT	ZORRAVISTA	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	2-10	---	10-25	2-10	2-5
basin wildrye	ELCI2	10-20	40-60	---	10-20	---
bottlebrush squirreltail	SIBY	---	---	---	---	2-5
creeping wildrye	ELTR3	---	5-30	---	---	---
needleandthread	STCO4	---	---	2-5	---	---
other perennial grasses	PPGG	---	---	2-8	---	---
thickspike wheatgrass	AGDA	---	---	5-15	---	---
big sagebrush	ARTR2	20-30	5-15	30-40	20-30	---
black greasewood	SAVE4	30-40	---	---	30-40	20-30
bud sagebrush	ARSP5	---	---	---	---	2-10
fourwing saltbush	ATCA2	---	---	5-15	---	---
rubber rabbitbrush	CHNA2	2-5	---	2-5	2-5	---
shadscale	ATCO	---	---	---	---	20-50
spiny hopsage	GRSP	---	---	5-10	---	---
Range site number		028BY028NV	028AY025NV	028BY068NV	028BY028NV	028BY074NV
Potential production (lb/acre):						
Favorable years		800	1800	800	800	600
Normal years		600	1500	500	600	400
Unfavorable years		400	1100	300	400	200

943--SHEFFIT-UMBERLAND ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		SHEFFIT	UMBERLAND	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORRY	2-10	---	---	2-5	---
alkali sacaton	SPAI	---	15-40	---	---	---
basin wildrye	ELCI2	10-20	40-60	---	---	---
bottlebrush squirreltail	SIHY	---	---	5-10	2-5	---
inland saltgrass	DISPS2	---	2-5	---	---	20-30
western wheatgrass	AGSM	---	2-5	2-5	---	---
big sagebrush	ARTR2	20-30	---	---	---	---
black greasewood	SAVE4	30-40	5-15	15-25	20-30	---
bud sagebrush	ARSP5	---	---	---	2-10	---
iodinebush	ALOC2	---	---	---	---	50-60
rubber rabbitbrush	CHNA2	2-5	2-5	---	---	---
shadscale	ATCO	---	---	2-5	20-50	---
sickle saltbush	ATFA	---	---	50-60	---	---
Range site number		028BY028NV	028BY004NV	028BY097NV	028BY074NV	028AY009NV
Potential production (lb/acre):						
Favorable years		800	2200	500	600	150
Normal years		600	1500	350	400	100
Unfavorable years		400	800	200	200	75

960--GRAVIER-ZERK ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or inclusion number--				
		GRAVIER	ZERK	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	40-50	40-50	20-35	---	20-30
Sandberg bluegrass	POSE	---	---	2-8	---	2-5
bottlebrush squirreltail	SIHY	2-5	2-5	2-5	5-10	2-8
needleandthread	STCO4	---	---	5-15	---	10-20
western wheatgrass	AGSM	---	---	---	2-5	---
globemallow	SPHAE	---	1-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35
black greasewood	SAVE4	---	---	---	15-25	---
black sagebrush	ARARN	---	---	25-35	---	---
bud sagebrush	ARSP5	5-15	---	---	---	---
downy rabbitbrush	CHVIP4	---	---	2-5	---	---
rabbitbrush	CHRY99	---	---	---	---	2-5
shadscale	ATCO	---	25-35	2-5	2-5	---
sickle saltbush	ATFA	---	---	---	50-60	---
winterfat	EULA5	20-30	5-10	---	---	---
Range site number		028BY084NV	028BY075NV	028BY011NV	028BY097NV	028BY010NV
Potential production (lb/acre):						
Favorable years		900	700	600	500	800
Normal years		700	500	450	350	600
Unfavorable years		400	300	250	200	400

961--GRAVIER-PILTDOWN-ZERK ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		GRAVIER	PILTDOWN	ZERK	Inclusion 1
Indian ricegrass	ORRY	40-50	50-70	40-50	1-5
bottlebrush squirreltail	SIHY	2-5	---	2-5	5-10
galleta	HIJA	---	2-5	---	---
needleandthread	STCO4	---	2-5	---	---
sand dropseed	SPCR	---	5-15	---	---
globemallow	SPHAE	---	---	1-5	---
bud sagebrush	ARSP5	5-15	---	---	---
fourwing saltbush	ATCA2	---	15-25	---	---
shadscale	ATCO	---	---	25-35	85-90
winterfat	EULA5	20-30	2-8	5-10	---
Range site number		028BY084NV	029XY012NV	028BY075NV	028BY073NV
Potential production (lb/acre):					
Favorable years		900	700	700	400
Normal years		700	500	500	300
Unfavorable years		400	300	300	200

972--ZIMBOB-POOKALOO ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		ZIMBOB	ZIMBOB	POOKALOO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	10-20	15-25	X	5-15	10-20	2-5	---
Sandberg bluegrass	POSE	2-5	2-5	---	---	---	---	---
Scribner needlegrass	STSC2	---	2-5	---	---	---	2-10	---
Thurber needlegrass	STTH2	---	---	X	---	---	---	---
basin wildrye	ELCI2	---	---	X	2-5	---	---	---
bluebunch wheatgrass	AGSP	---	2-5	X	30-50	20-40	---	---
bluegrass	FOA++	---	---	X	2-8	2-5	---	---
bottlebrush squirreltail	SIHY	2-5	2-5	X	---	---	---	---
needleandthread	STCO4	10-20	---	---	2-5	2-5	---	---
arrowleaf balsamroot	BASA3	---	---	X	---	---	---	---
goldenweed	HAPLO2	---	---	---	---	2-5	2-5	---
tapertip hawkbeard	CRAC2	---	---	X	---	2-5	---	---
Stansbury cliffrose	COMES	---	---	X	---	---	---	---
antelope bitterbrush	PUTR2	---	---	X	---	---	---	---
big sagebrush	ARTR2	---	---	---	20-30	---	---	---
black sagebrush	ARARN	35-45	30-35	X	---	25-35	2-8	---
curleaf mountainmahogany	CELE3	---	---	X	---	---	---	---
desert snowberry	SYLO	---	---	---	---	---	2-8	---
littleleaf mountainmahogany	CEIN7	---	---	---	---	---	60-70	---
serviceberry	AMELA	---	---	X	---	---	---	---
shadscale	ATCO	2-5	---	---	---	2-5	---	---
winterfat	EULA5	---	---	---	---	2-5	---	---
Utah juniper	JUOS	---	---	X	---	---	---	---
singleleaf pinyon	PIMO	---	---	X	---	---	---	---
Range site number		028BY016NV	028BY059NV	028BY060NV	028BY094NV	028BY008NV	028BY066NV	None
Potential production (lb/acre):								
Favorable years		350	400	500	800	600	1300	
Normal years		225	350	300	600	400	1000	
Unfavorable years		100	125	250	400	200	800	

974--ZIMBOB-TECOMar-POOKALOO ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		ZIMBOB	TECOMar	POOKALOO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	10-20	10-20	X	15-25	5-10	15-25	20-35
Sandberg bluegrass	POSE	2-5	---	---	2-5	---	---	2-8
Scribner needlegrass	STSC2	---	---	---	2-5	---	---	---
Thurber needlegrass	STTH2	---	---	X	---	---	---	---
basin wildrye	ELCI2	---	---	X	---	10-20	---	---
bluebunch wheatgrass	AGSP	---	20-40	X	2-5	---	---	---
bluegrass	POA++	---	2-5	X	---	---	---	---
bottlebrush squirreltail	SIHY	2-5	---	X	2-5	---	2-5	2-5
needleandthread	STCO4	10-20	2-5	---	---	---	5-10	5-15
thickspike wheatgrass	AGDA	---	---	---	---	5-10	---	---
arrowleaf balsamroot	BASA3	---	---	X	---	---	---	---
goldenweed	HAPLO2	---	2-5	---	---	---	---	---
scarlet globemallow	SFCO	---	---	---	---	---	2-5	---
tapertip hawksbeard	CRAC2	---	2-5	X	---	---	---	---
Stansbury cliffrose	COMES	---	---	X	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	20-35	---
antelope bitterbrush	PUTR2	---	---	X	---	---	---	---
black sagebrush	ARARN	35-45	25-35	X	30-35	---	---	25-35
curlleaf mountainmahogany	CELE3	---	---	X	---	---	---	---
downy rabbitbrush	CHVIP4	---	---	---	---	---	---	2-5
serviceberry	AMELA	---	---	X	---	---	---	---
shadscale	ATCO	2-5	2-5	---	---	---	2-5	2-5
spiny hopsage	GRSP	---	---	---	---	---	5-20	---
winterfat	EULA5	---	2-5	---	---	---	---	---
Utah juniper	JUOS	---	---	X	---	---	---	---
singleleaf pinyon	FIMO	---	---	X	---	---	---	---
Range site number		028BY016NV	028BY008NV	028BY060NV	028BY059NV	028BY045NV	028BY052NV	028BY011NV
Potential production (lb/acre):								
Favorable years		350	600	500	400	1000	800	600
Normal years		225	400	300	350	800	600	450
Unfavorable years		100	200	250	125	600	450	250

975--TECOMar-ZIMBOB ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		ZIMBOB	TECOMar	TECOMar	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORBY	10-20	10-20	5-10	---	X	5-15	15-25
Sandberg bluegrass	POSE	2-5	---	2-5	---	---	---	2-5
Scribner needlegrass	STSC2	---	---	2-5	---	---	---	2-5
Thurber needlegrass	STTH2	---	---	---	---	X	---	---
basin wildrye	ELCI2	---	---	---	---	X	2-5	---
bluebunch wheatgrass	AGSP	---	20-40	15-25	---	X	30-50	2-5
bluegrass	POA++	---	2-5	---	---	X	2-8	---
bottlebrush squirreltail	SIHY	2-5	---	---	---	X	---	2-5
needleandthread	STCO4	10-20	2-5	---	---	---	2-5	---
arrowleaf balsamroot	BASA3	---	---	---	---	X	---	---
goldenweed	HAPLO2	---	2-5	---	---	---	---	---
tapertip hawksbeard	CRAC2	---	2-5	---	---	X	---	---
Douglas rabbitbrush	CHVI8	---	---	2-5	---	---	---	---
Mexican cliffrose	COMES	---	---	1-10	---	---	---	---
Stansbury cliffrose	COMES	---	---	---	---	X	---	---
antelope bitterbrush	PUTR2	---	---	---	---	X	---	---
big sagebrush	ARTR2	---	---	---	---	---	20-30	---
black sagebrush	ARARN	35-45	25-35	30-40	---	X	---	30-35
curlleaf mountainmahogany	CELE3	---	---	---	---	X	---	---
serviceberry	AMELA	---	---	---	---	X	---	---
shadscale	ATCO	2-5	2-5	---	---	---	---	---
winterfat	EULA5	---	2-5	---	---	---	---	---
Utah juniper	JUOS	---	---	---	---	X	---	---
singleleaf pinyon	PIMO	---	---	10-15	---	X	---	---
Range site number		028BY016NV	028BY008NV	028BY090NV	None	028BY060NV	028BY094NV	028BY059NV
Potential production (lb/acre):								
Favorable years		350	600	400		500	800	400
Normal years		225	400	250		300	600	350
Unfavorable years		100	200	125		250	400	125

980--ONKEYO-POOKALOO-ZIMBOB ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		ONKEYO	POOKALOO	ZIMBOB	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	15-30	X	10-20	2-5	---	---	---
Thurber needlegrass	STTH2	---	X	---	30-40	---	---	---
basin wildrye	ELCI2	---	X	---	---	---	2-8	---
bluebunch wheatgrass	AGSP	30-40	X	20-40	15-30	10-20	40-50	---
bluegrass	POA++	5-10	X	2-5	2-8	2-8	5-10	---
bottlebrush squirreltail	SIHY	---	X	---	---	---	---	---
needleandthread	STCO4	---	---	2-5	2-8	---	---	---
needlegrass	STIPA	---	---	---	---	5-15	---	---
arrowleaf balsamroot	BASA3	---	X	---	2-5	---	---	---
goldenweed	HAPLO2	---	---	2-5	---	---	---	---
tapertip hawksbeard	CRAC2	---	X	2-5	2-5	---	---	---
Stansbury cliffrose	COMES	---	X	---	---	---	---	---
Utah serviceberry	AMUT	---	---	---	---	35-45	1-5	---
antelope bitterbrush	POTR2	5-10	X	---	2-10	---	2-10	---
big sagebrush	ARTR2	---	---	---	15-25	---	---	---
black sagebrush	ARARN	---	X	25-35	---	---	---	---
curlleaf mountainmahogany	CELE3	---	X	---	---	---	---	---
mountain big sagebrush	ARVA2	15-25	---	---	---	5-15	10-20	---
serviceberry	AMELA	---	X	---	---	---	---	---
shadscale	ATCO	---	---	2-5	---	---	---	---
snowberry	SYMPH	---	---	---	---	2-8	2-5	---
winterfat	EULA5	---	---	2-5	---	---	---	---
Utah juniper	JUOS	---	X	---	---	---	---	---
singleleaf pinyon	PIMO	---	X	---	---	---	---	---
Range site number		028BY079NV	028BY060NV	028BY008NV	028BY007NV	028BY026NV	028BY089NV	None
Potential production (lb/acre):								
Favorable years		700	500	600	1000	1200	1100	
Normal years		500	300	400	800	900	900	
Unfavorable years		300	250	200	600	700	700	

990--HYZEN-ZIMBOB ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		HYZEN	ZIMBOB	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	2-5	15-25	---	X
Sandberg bluegrass	POSE	---	2-5	---	---
Scribner needlegrass	STSC2	2-10	2-5	---	---
Thurber needlegrass	STTH2	---	---	---	X
basin wildrye	ELCI2	---	---	---	X
bluebunch wheatgrass	AGSF	---	2-5	---	X
bluegrass	POA++	---	---	---	X
bottlebrush squirreltail	SIHY	---	2-5	---	X
arrowleaf balsamroot	BASA3	---	---	---	X
goldenweed	HAPLO2	2-5	---	---	---
tapertip hawkbeard	CRAC2	---	---	---	X
Stansbury cliffrose	COMES	---	---	---	X
antelope bitterbrush	PUTR2	---	---	---	X
black sagebrush	ARARN	2-8	30-35	---	X
curlleaf mountainmahogany	CELE3	---	---	---	X
desert snowberry	SYLO	2-8	---	---	---
littleleaf mountainmahogany	CEIN7	60-70	---	---	---
serviceberry	AMELA	---	---	---	X
Utah juniper	JUOS	---	---	---	X
singleleaf pinyon	PIMO	---	---	---	X
Range site number		028BY066NV	028BY059NV	028BY060NV	028BY060NV
Potential production (lb/acre):					
Favorable years		1300	400		500
Normal years		1000	350		300
Unfavorable years		800	125		250

991--HYZEN-CAVEHILL-TECOMar ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		HYZEN	CAVEHILL	TECOMar	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	X	---	---	5-15	---	---
Indian ricegrass	ORHY	X	---	10-20	---	---	---	---
Sandberg bluegrass	POSE	---	X	---	---	---	---	---
Thurber needlegrass	STTR2	X	---	---	---	---	---	---
basin wildrye	ELCI2	X	X	---	---	---	---	2-8
bluebunch wheatgrass	AGSP	X	X	20-40	60-80	60-80	---	40-50
bluegrass	POA++	X	---	2-5	---	---	---	5-10
bottlebrush squirreltail	SINY	X	X	---	---	---	---	---
muttongrass	POPE	---	X	---	2-10	---	---	---
needleandthread	STCO4	---	---	2-5	---	---	---	---
spike-fescue	LEKI2	---	---	---	---	1-10	---	---
arrowleaf balsamroot	BASA3	X	X	---	---	---	---	---
goldenweed	HAPLO2	---	---	2-5	2-5	---	---	---
tapertip hawksbeard	CRAC2	X	X	2-5	---	---	---	---
Stansbury cliffrose	COMES	X	---	---	---	---	---	---
Utah serviceberry	AMUT	---	---	---	---	---	---	1-5
antelope bitterbrush	PUTR2	X	X	---	---	---	---	2-10
black sagebrush	ARARN	X	---	25-35	25-35	---	---	---
curleaf mountainmahogany	CELE3	X	X	---	---	---	---	---
mountain big sagebrush	ARVA2	---	X	---	---	10-20	---	10-20
serviceberry	AMELA	X	X	---	---	---	---	---
shadscale	ATCO	---	---	2-5	---	---	---	---
snowberry	SYMPH	---	X	---	---	2-8	---	2-5
winterfat	EULA5	---	---	2-5	---	---	---	---
Utah juniper	JUOS	X	X	---	---	---	---	---
singleleaf pinyon	PIMO	X	X	---	---	---	---	---
Range site number		028BY060NV	028BY058NV	028BY008NV	028BY027NV	028BY070NV	None	028BY088NV
Potential production (lb/acre):								
Favorable years		500	500	600	600	1100		1100
Normal years		300	300	400	450	900		900
Unfavorable years		250	200	200	300	600		700

1000--PYRAT-ZERK ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		PYRAT	ZERK	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-30	40-50	40-50	5-10	15-25	10-20
Sandberg bluegrass	POSE	2-5	---	---	---	---	---
basin wildrye	ELCI2	---	---	---	10-20	---	---
bottlebrush squirreltail	SIHY	2-8	2-5	2-5	---	5-10	5-15
needleandthread	STCO4	10-20	---	---	---	---	---
other perennial grasses	PPGG	---	---	---	---	2-5	---
thickspike wheatgrass	AGDA	---	---	---	5-10	---	---
globemallow	SPRAE	---	---	1-5	---	2-5	---
Wyoming big sagebrush	ARTRW	25-35	---	---	25-35	---	---
bud sagebrush	ARSP5	---	5-15	---	---	2-8	10-25
fourwing saltbush	ATCA2	---	---	---	---	2-5	---
rabbitbrush	CHRY59	2-5	---	---	---	---	---
shadscale	ATCO	---	---	25-35	---	---	40-50
winterfat	EULA5	---	20-30	5-10	---	40-50	---
Range site number		028BY010NV	028BY084NV	028BY075NV	028BY045NV	028BY013NV	028BY017NV
Potential production (lb/acre):							
Favorable years		800	900	700	1000	700	400
Normal years		600	700	500	800	500	300
Unfavorable years		400	400	300	600	350	200

1001--PYRAT-OKAN-EASTWELL ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		FYRAT	OKAN	EASTWELL	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORBY	20-30	20-30	20-35	X	20-35	15-25	2-10
Sandberg bluegrass	POSE	2-5	2-5	2-8	---	2-8	---	2-5
basin wildrye	ELCI2	---	---	---	X	---	---	---
bluegrass	POA++	---	---	---	X	---	---	---
bottlebrush squirreltail	SIHY	2-8	2-8	2-5	X	2-5	5-10	2-5
needleandthread	STCO4	10-20	10-20	5-15	X	5-15	---	2-10
other perennial grasses	PPGG	---	---	---	---	---	2-5	---
globemallow	SPHAE	---	---	---	---	---	2-5	---
thickstem wildcabbage	CACR11	---	---	---	X	---	---	---
Utah juniper	JUOS	---	---	---	X	---	---	---
Wyoming big sagebrush	ARTRW	25-35	25-35	---	---	---	---	---
antelope bitterbrush	PUTR2	---	---	---	X	---	---	---
black sagebrush	ARARN	---	---	25-35	X	25-35	---	---
bud sagebrush	ARSP5	---	---	---	---	---	2-8	---
downy rabbitbrush	CHVIP4	---	---	2-5	---	2-5	---	---
fourwing saltbush	ATCA2	---	---	---	---	---	2-5	---
pigmy sagebrush	ARPY2	---	---	---	---	---	---	50-70
rabbitbrush	CHRY89	2-5	2-5	---	---	---	---	---
shadscale	ATCO	---	---	2-5	---	2-5	---	---
winterfat	EULA5	---	---	---	---	---	40-50	---
Range site number		028BY010NV	028BY010NV	028BY011NV	028BY083NV	028BY011NV	028BY013NV	028BY040NV
Potential production (lb/acre):								
Favorable years		800	800	600	300	600	700	250
Normal years		600	600	450	200	450	500	175
Unfavorable years		400	400	250	125	250	350	100

1002--THREESEE-KUNZLER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		THREESEE	KUNZLER	THREESEE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-30	---	20-30	15-25	2-5	10-20	15-25
Sandberg bluegrass	POSE	2-5	5-10	2-5	---	---	2-5	---
bluegrass	POA++	---	---	---	2-5	---	---	---
bottlebrush squirreltail	SIHY	2-8	5-15	2-8	2-5	2-5	2-5	5-10
needleandthread	STCO4	10-20	---	10-20	---	---	10-20	---
other perennial grasses	PPGG	---	---	---	---	---	---	2-5
wheatgrass	AGROP2	---	---	---	5-10	---	---	---
globemallow	SPHAE	---	---	---	---	---	---	2-5
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	25-35	60-70	25-35	30-35	---	---	---
black greasewood	SAVE4	---	---	---	---	20-30	---	---
black sagebrush	ARARN	---	---	---	---	---	35-45	---
bud sagebrush	ARSP5	---	---	---	---	2-10	---	2-8
fourwing saltbush	ATCA2	---	---	---	---	---	---	2-5
rabbitbrush	CHRY89	2-5	---	2-5	---	---	---	---
shadscale	ATCO	---	---	---	---	20-50	2-5	---
winterfat	EULA5	---	---	---	15-30	---	---	40-50
Range site number		028BY010NV	028BY056NV	028BY010NV	028BY054NV	028BY074NV	028BY016NV	028BY013NV
Potential production (lb/acre):								
Favorable years		800	450	800	600	600	350	700
Normal years		600	325	600	450	400	225	500
Unfavorable years		400	150	400	200	200	100	350

1003--PYRAT-HUNDRAW-TULASE ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		PYRAT	HUNDRAW	TULASE	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	20-30	X	5-10	20-35	10-20
Sandberg bluegrass	POSE	2-5	---	---	2-8	2-5
basin wildrye	ELCI2	---	X	10-20	---	---
bluegrass	POA++	---	X	---	---	---
bottlebrush squirreltail	SIKY	2-8	X	---	2-5	2-5
needleandthread	STCO4	10-20	X	---	5-15	10-20
thickspike wheatgrass	AGDA	---	---	5-10	---	---
thickstem wildcabbage	CACR11	---	X	---	---	---
Utah juniper	JUOS	---	X	---	---	---
Wyoming big sagebrush	ARTRW	25-35	---	25-35	---	---
antelope bitterbrush	PUTR2	---	X	---	---	---
black sagebrush	ARARN	---	X	---	25-35	35-45
downy rabbitbrush	CHVIP4	---	---	---	2-5	---
rabbitbrush	CHRY89	2-5	---	---	---	---
shadscale	ATCO	---	---	---	2-5	2-5
Range site number		028BY010NV	028BY083NV	028BY045NV	028BY011NV	028BY016NV
Potential production (lb/acre):						
Favorable years		800	300	1000	600	350
Normal years		600	200	800	450	225
Unfavorable years		400	125	600	250	100

1004--PYRAT-PARISA-TULASE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or inclusion number--						
		PYRAT	PARISA	TULASE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-30	20-30	5-10	15-25	20-35	2-10	40-50
Sandberg bluegrass	POSE	2-5	2-5	---	---	2-8	---	---
basin wildrye	ELCI2	---	---	10-20	---	---	10-20	---
bottlebrush squirreltail	SIHY	2-8	2-8	---	2-5	2-5	---	2-5
needleandthread	STCO4	10-20	10-20	---	5-10	5-15	---	---
thickspike wheatgrass	AGDA	---	---	5-10	---	---	---	---
scarlet globemallow	SPCO	---	---	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	25-35	25-35	25-35	20-35	---	---	---
big sagebrush	ARTR2	---	---	---	---	---	20-30	---
black greasewood	SAVE4	---	---	---	---	---	30-40	---
black sagebrush	ARARN	---	---	---	---	25-35	---	---
bud sagebrush	ARSP5	---	---	---	---	---	---	5-15
downy rabbitbrush	CHVIP4	---	---	---	---	2-5	---	---
rabbitbrush	CHRY89	2-5	2-5	---	---	---	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	---	2-5	---
shadscale	ATCO	---	---	---	2-5	2-5	---	---
spiny hopsage	GRSP	---	---	---	5-20	---	---	---
winterfat	EULA5	---	---	---	---	---	---	20-30
Range site number		028BY010NV	028BY010NV	028BY045NV	028BY052NV	028BY011NV	028BY028NV	028BY084NV
Potential production (lb/acre):								
Favorable years		800	800	1000	800	600	800	900
Normal years		600	600	800	600	450	600	700
Unfavorable years		400	400	600	450	250	400	400

1005--PYRAT-ZERK-PARISA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		PYRAT	ZERK	PARISA	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-30	40-50	20-30	10-20	15-25	2-10	2-5
Sandberg bluegrass	POSE	2-5	---	2-5	---	---	---	---
basin wildrye	ELCI2	---	---	---	---	---	10-20	---
bottlebrush squirreltail	SIHY	2-8	2-5	2-8	5-15	2-5	---	2-5
needleandthread	STCO4	10-20	---	10-20	---	5-10	---	---
globemallow	SPHAE	---	1-5	---	---	---	---	---
scarlet globemallow	SPCO	---	---	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	25-35	---	25-35	---	20-35	---	---
big sagebrush	ARTR2	---	---	---	---	---	20-30	---
black greasewood	SAVE4	---	---	---	---	---	30-40	20-30
bud sagebrush	ARSP5	---	---	---	10-25	---	---	2-10
rabbitbrush	CHRY99	2-5	---	2-5	---	---	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	---	2-5	---
shadscale	ATCO	---	25-35	---	40-50	2-5	---	20-50
spiny hopsage	GRSP	---	---	---	---	5-20	---	---
winterfat	EULA5	---	5-10	---	---	---	---	---
Range site number		028BY010NV	028BY075NV	028BY010NV	028BY017NV	028BY052NV	028BY028NV	028BY074NV
Potential production (lb/acre):								
Favorable years		800	700	800	400	800	800	600
Normal years		600	500	600	300	600	600	400
Unfavorable years		400	300	400	200	450	400	200

1006--PYRAT-BLIMO ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		PYRAT	BLIMO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-30	20-30	20-30	15-25	2-10	20-35
Sandberg bluegrass	POSE	2-5	2-5	2-5	---	---	2-8
basin wildrye	ELC12	---	---	---	---	10-20	---
bottlebrush squirreltail	SIHY	2-8	2-8	2-8	2-5	---	2-5
needleandthread	STCO4	10-20	10-20	10-20	5-10	---	5-15
scarlet globemallow	SPCO	---	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	25-35	25-35	25-35	20-35	---	---
big sagebrush	ARTR2	---	---	---	---	20-30	---
black greasewood	SAVE4	---	---	---	---	30-40	---
black sagebrush	ARARN	---	---	---	---	---	25-35
downy rabbitbrush	CHVIP4	---	---	---	---	---	2-5
rabbitbrush	CHRY99	2-5	2-5	2-5	---	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	2-5	---
shadscale	ATCO	---	---	---	2-5	---	2-5
spiny hopsage	GRSP	---	---	---	5-20	---	---
Range site number		028BY010NV	028BY010NV	028BY010NV	028BY052NV	028BY026NV	028BY011NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	600
Normal years		600	600	600	500	600	450
Unfavorable years		400	400	400	450	400	250

1007--PYRAT-PARISA-AUTOMAL ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		PYRAT	PARISA	AUTOMAL	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	20-30	20-30	20-35	10-20	20-30	2-10
Sandberg bluegrass	POSE	2-5	2-5	2-8	---	2-5	---
basin wildrye	ELCI2	---	---	---	---	---	10-20
bluebunch wheatgrass	AGSP	---	---	---	20-40	---	---
bottlebrush squirreltail	SIHY	2-8	2-8	2-5	---	2-8	---
muttongrass	POFE	---	---	---	2-8	---	---
needleandthread	STCO4	10-20	10-20	5-15	2-5	10-20	---
Wyoming big sagebrush	ARTHW	25-35	25-35	---	---	25-35	---
big sagebrush	ARTR2	---	---	---	---	---	20-30
black greasewood	SAVE4	---	---	---	---	---	30-40
black sagebrush	ARARN	---	---	25-35	20-30	---	---
downy rabbitbrush	CHVIP4	---	---	2-5	---	---	---
rabbitbrush	CHRY89	2-5	2-5	---	---	2-5	---
rubber rabbitbrush	CHNA2	---	---	---	---	---	2-5
shadscale	ATCO	---	---	2-5	---	---	---
winterfat	EULA5	---	---	---	2-5	---	---
Range site number		028BY010NV	028BY010NV	028BY011NV	028BY006NV	028BY010NV	028BY028NV
Potential production (lb/acre):							
Favorable years		800	800	600	800	800	800
Normal years		600	600	450	600	600	600
Unfavorable years		400	400	250	400	400	400

1009--PYRAT-TULASE-WINTERMUTE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		PYRAT	TULASE	WINTERMUTE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	20-30	20-30	40-50	15-25	40-50	2-10	15-25
Sandberg bluegrass	POSE	2-5	2-5	---	---	---	---	---
basin wildrye	ELCI2	---	---	---	5-10	---	10-20	---
bottlebrush squirreltail	SIHY	2-8	2-8	2-5	2-8	2-5	---	5-10
needleandthread	STCO4	10-20	10-20	---	---	---	---	---
other perennial grasses	PPGG	---	---	---	---	---	---	2-5
wheatgrass	AGROP2	---	---	---	5-15	---	---	---
globemallow	SPHA2	---	---	1-5	---	1-5	---	2-5
Wyoming big sagebrush	ARTRW	25-35	25-35	---	30-45	---	---	---
big sagebrush	ARTR2	---	---	---	---	---	20-30	---
black greasewood	SAVE4	---	---	---	---	---	30-40	---
bud sagebrush	ARSP5	---	---	---	---	---	---	2-8
fourwing saltbush	ATCA2	---	---	---	---	---	---	2-5
rabbitbrush	CHRY59	2-5	2-5	---	---	---	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	---	2-5	---
shadscale	ATCO	---	---	25-35	---	25-35	---	---
winterfat	EULA5	---	---	5-10	2-8	5-10	---	40-50
Range site number		028BY010NV	028BY010NV	028BY075NV	028BY014NV	028BY075NV	028BY028NV	028BY013NV
Potential production (lb/acre):								
Favorable years		800	800	700	600	700	800	700
Normal years		600	600	500	450	500	600	500
Unfavorable years		400	400	300	200	300	400	350

1020--OKAN-EASTWELL-BLIMO ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		OKAN	EASTWELL	BLIMO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-30	20-35	20-30	20-35	X	15-25	2-8
Sandberg bluegrass	POSE	2-5	2-8	2-5	2-8	---	---	---
basin wildrye	ELCI2	---	---	---	---	X	---	---
bluegrass	POA++	---	---	---	---	X	---	---
bottlebrush squirreltail	SIHY	2-8	2-5	2-8	2-5	X	5-10	2-5
needleandthread	STCO4	10-20	5-15	10-20	5-15	X	---	---
other perennial grasses	PFGG	---	---	---	---	---	2-5	---
western wheatgrass	AGSM	---	---	---	---	---	---	5-15
globemallow	SPHAE	---	---	---	---	---	2-5	---
thickstem wildcabbage	CACR11	---	---	---	---	X	---	---
Utah juniper	JUOS	---	---	---	---	X	---	---
Wyoming big sagebrush	ARTRW	25-35	---	25-35	---	---	---	---
antelope bitterbrush	POTR2	---	---	---	---	X	---	---
black sagebrush	ARARN	---	25-35	---	25-35	X	---	---
bud sagebrush	ARSP5	---	---	---	---	---	2-8	---
downy rabbitbrush	CEVIP4	---	2-5	---	2-5	---	---	---
fourwing saltbush	ATCA2	---	---	---	---	---	2-5	---
rabbitbrush	CHRY99	2-5	---	2-5	---	---	---	---
shadscale	ATCO	---	2-5	---	2-5	---	---	2-5
sickle saltbush	ATPA	---	---	---	---	---	---	55-65
winterfat	EULA5	---	---	---	---	---	40-50	5-15
Range site number		028BY010NV	028BY011NV	028BY010NV	028BY011NV	028BY083NV	028BY013NV	028BY047NV
Potential production (lb/acre):								
Favorable years		800	600	800	600	300	700	500
Normal years		600	450	600	450	200	500	350
Unfavorable years		400	250	400	250	125	350	200

1023--OKAN-KATELANA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		OKAN	OKAN	KATELANA	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	20-30	20-30	1-5	20-30	20-30	2-5	40-50
Sandberg bluegrass	POSE	2-5	2-5	---	2-5	2-5	---	---
bottlebrush squirreltail	SIRY	2-5	2-8	5-10	2-8	2-8	2-5	2-5
needleandthread	STCO4	10-20	10-20	---	10-20	10-20	---	---
globemallow	SPHA	---	---	---	---	---	---	1-5
Wyoming big sagebrush	ARTRW	25-35	25-35	---	25-35	25-35	---	---
black greasewood	SAVE4	---	---	---	---	---	20-30	---
bud sagebrush	ARSP5	---	---	---	---	---	2-10	---
rabbitbrush	CHRY9	---	2-5	---	2-5	2-5	---	---
shadscale	ATCO	---	---	85-90	---	---	20-50	25-35
winterfat	EULA5	---	---	---	---	---	---	5-10
Range site number		028BY080NV	028BY010NV	028BY073NV	028BY010NV	028BY010NV	028BY074NV	028BY075NV
Potential production (lb/acre):								
Favorable years		600	800	400	800	800	600	700
Normal years		400	600	300	600	600	400	500
Unfavorable years		200	400	200	400	400	200	300

1030--SEGURA-BULLUMP-HUTCHLEY ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		SEGURA	BULLUMP	HUTCHLEY	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORBY	2-5	---	---	---	---	---	---
Letterman needlegrass	STLE4	---	---	---	---	---	---	50-70
Thurber needlegrass	STTH2	---	---	10-20	---	---	---	---
basin wildrye	ELCI2	---	2-8	---	---	---	---	---
bluebunch wheatgrass	AGSP	10-20	30-40	20-40	20-30	20-30	---	---
bluegrass	POA++	2-8	2-8	5-10	---	2-10	---	2-10
muttongrass	POPE	---	---	---	2-8	---	---	---
needlegrass	STIPA	5-10	5-15	---	5-15	---	---	---
pine needlegrass	STPI2	---	---	2-8	---	---	---	---
arrowleaf balsamroot	BASA3	---	2-5	---	---	---	---	---
goldenweed	HAPLO2	---	---	2-5	---	---	---	---
lupine	LUPIN	---	---	---	---	---	---	2-8
penstemon	PENST	---	---	---	---	---	---	2-5
tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---	---
Utah serviceberry	AMUT	---	2-8	---	---	---	---	---
antelope bitterbrush	PUTR2	30-45	2-8	---	---	2-5	---	---
low sagebrush	ARAR8	---	---	---	---	25-35	---	---
mountain big sagebrush	ARVA2	5-15	10-20	---	15-25	---	---	---
sagebrush	ARTEM	---	---	35-45	---	---	---	---
snowberry	SYMPH	---	2-8	---	2-8	---	---	---
curlleaf mountainmahogany	CELE3	---	---	---	15-25	---	---	---
Range site number		028BY046NV	028BY015NV	028BY034NV	028BY043NV	028BY037NV	None	028BY051NV
Potential production (lb/acre):								
Favorable years		1200	1500	350	1700	800		700
Normal years		900	1100	200	1300	600		500
Unfavorable years		700	700	100	900	400		300

1040--SEGURA-PIOCHE-CHEN ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		SEGURA	PIOCHE	CHEN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	X	---	X	---	---	---
Indian ricegrass	ORHY	---	X	---	X	---	2-5	---
Sandberg bluegrass	POSE	---	X	---	X	---	---	---
Thurber needlegrass	STTH2	15-30	X	---	X	---	---	---
basin wildrye	ELCI2	2-8	X	---	---	---	---	2-8
bluebunch wheatgrass	AGSP	20-40	X	20-30	X	10-20	10-20	30-40
bluegrass	POA++	2-5	---	2-10	---	2-8	2-8	2-8
bottlebrush squirreltail	SIHY	---	X	---	X	---	---	---
muttongrass	POPE	---	---	---	X	---	---	---
needlegrass	STIPA	---	---	---	---	5-15	5-10	5-15
arrowleaf balsamroot	BASA3	---	X	---	X	---	---	2-5
crag aster	ASSC3	2-5	---	---	---	---	---	---
tapertip hawksbeard	CRAC2	2-5	X	---	X	---	---	2-5
Utah serviceberry	AMUT	---	---	---	---	35-45	---	2-8
antelope bitterbrush	FUTR2	5-10	X	2-5	X	---	30-45	2-8
ephedra	EPHED	---	X	---	---	---	---	---
low sagebrush	ARAR8	---	---	25-35	X	---	---	---
mountain big sagebrush	ARVA2	15-25	X	---	---	5-15	5-15	10-20
serviceberry	AMELA	---	X	---	X	---	---	---
snowberry	SYMPH	---	---	---	---	2-8	---	2-8
Utah juniper	JUOS	---	X	---	X	---	---	---
singleleaf pinyon	PINO	---	X	---	X	---	---	---
Range site number		028BY087NV	028BY062NV	028BY037NV	028BY064NV	028BY026NV	028BY046NV	028BY015NV
Potential production (lb/acre):								
Favorable years		900	700	800	500	1200	1200	1500
Normal years		700	500	600	300	900	900	1100
Unfavorable years		450	300	400	150	700	700	700

1061--PIOCHE-CUCAMUNGO-ROCK OUTCROP ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		PIOCHE	CUCAMUNGO	ROCK OUTCROP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	X	---	---	---	---	---	---
Idaho fescue	FEID	---	X	---	---	---	15-25	---
Indian ricegrass	ORRY	X	---	---	---	---	---	2-5
Nevada bluegrass	PONE3	---	X	---	---	---	---	---
Sandberg bluegrass	POSE	X	---	---	---	---	---	---
Thurber needlegrass	STTH2	X	---	---	---	15-30	---	10-20
arrowleaf balsamroot	BASA3	X	X	---	---	---	---	---
basin wildrye	ELCI2	X	X	---	---	2-8	---	---
bluebunch wheatgrass	AGSP	X	X	---	20-30	20-40	5-15	20-30
bluegrass	POA++	---	---	---	2-10	2-5	2-5	2-8
bottlebrush squirreltail	SIHY	X	---	---	---	---	---	---
needlegrass	STIPA	---	---	---	---	---	2-8	---
arrowleaf balsamroot	BASA3	X	X	---	---	---	---	---
crag aster	ASSC3	---	---	---	---	2-5	---	---
tapertip hawksbeard	CRAC2	X	X	---	---	2-5	---	---
Utah serviceberry	AMUT	---	X	---	---	---	---	---
antelope bitterbrush	POTR2	X	X	---	2-5	5-10	2-5	---
black sagebrush	ARARN	---	---	---	---	---	---	25-35
curleaf mountainmahogany	CELE3	---	X	---	---	---	---	---
ephedra	EPHED	X	---	---	---	---	---	---
low sagebrush	ARAR8	---	---	---	25-35	---	---	---
mountain big sagebrush	ARVA2	X	X	---	---	15-25	5-15	---
serviceberry	AMELA	X	---	---	---	---	---	---
snowberry	SYMPH	---	X	---	---	---	2-8	---
Utah juniper	JUOS	X	---	---	---	---	---	---
singleleaf pinyon	PIMO	X	X	---	---	---	---	---
Range site number		028BY062NV	025XY061NV	Nons	028BY037NV	028BY087NV	025XY071NV	028BY093NV
Potential production (lb/acre):								
Favorable years		700	500		800	900	1700	800
Normal years		500	375		600	700	1300	600
Unfavorable years		300	250		400	450	900	400

1070--ZAFOD-AUTOMAL-OKAN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		ZAFOD	AUTOMAL	OKAN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	20-30	20-35	15-25	20-35	15-25	---	2-5
Sandberg bluegrass	POSE	2-5	2-8	---	2-8	---	---	---
Thurber needlegrass	STTH2	---	---	---	---	---	---	30-40
bluebunch wheatgrass	AGSP	---	---	---	---	---	---	15-30
bluegrass	POA++	---	---	---	---	---	---	2-8
bottlebrush squirreltail	SIBY	2-8	2-5	2-5	2-5	5-10	---	---
needleandthread	STCO4	10-20	5-15	5-10	5-15	---	---	2-8
other perennial grasses	PPGG	---	---	---	---	2-5	---	---
arrowleaf balsamroot	BASA3	---	---	---	---	---	---	2-5
globemallow	SPHAE	---	---	---	---	2-5	---	---
scarlet globemallow	SPCO	---	---	2-5	---	---	---	---
tapertip hawkbeard	CRAC2	---	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	25-35	---	20-35	---	---	---	2-10
antelope bitterbrush	POTR2	---	---	---	---	---	---	15-25
big sagebrush	ARTR2	---	---	---	---	---	---	---
black sagebrush	ARARN	---	25-35	---	25-35	---	---	---
bud sagebrush	ARSP5	---	---	---	---	2-8	---	---
downy rabbitbrush	CHVIP4	---	2-5	---	2-5	---	---	---
fourwing saltbush	ATCA2	---	---	---	---	2-5	---	---
rabbitbrush	CHRY89	2-5	---	---	---	---	---	---
shadscale	ATCO	---	2-5	2-5	2-5	---	---	---
spiny hopsage	GRSP	---	---	5-20	---	---	---	---
winterfat	EULA5	---	---	---	---	40-50	---	---
Range site number		028BY010NV	028BY011NV	028BY052NV	028BY011NV	028BY013NV	None	028BY007NV
Potential production (lb/acre):								
Favorable years		800	600	800	600	700		1000
Normal years		600	450	600	450	500		800
Unfavorable years		400	250	450	250	350		600

1080--COTANT-SEGURA ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		COTANT	SEGURA	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	---	X	---	---	---
Thurber needlegrass	STTE2	---	15-30	X	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	2-5
basin wildrye	ELCI2	---	2-8	X	2-8	---	---
bluebunch wheatgrass	AGSP	20-30	20-40	X	30-40	20-30	---
bluegrass	POA++	2-10	2-5	X	2-8	2-10	---
bottlebrush squirreltail	SIHY	---	---	X	---	---	---
meadow barley	HOBR2	---	---	---	---	---	2-5
needlegrass	STIPA	---	---	---	5-15	---	---
rush	JuncU	---	---	---	---	---	2-8
sedge	CAREX	---	---	---	---	---	20-30
tufted hairgrass	DecE	---	---	---	---	---	30-50
arrowleaf balsamroot	BASA3	---	---	X	2-5	---	---
crag aster	ASSC3	---	2-5	---	---	---	---
tapertip hawksbeard	CRAC2	---	2-5	X	2-5	---	---
Stansbury cliffrose	COMES	---	---	X	---	---	---
Utah serviceberry	AMUT	---	---	---	2-8	---	---
antelope bitterbrush	PUTR2	2-5	5-10	X	2-8	2-5	---
black sagebrush	ARARN	---	---	X	---	---	---
curlleaf mountainmahogany	CELE3	---	---	X	---	---	---
low sagebrush	ARAR8	25-35	---	---	---	25-35	---
mountain big sagebrush	ARVA2	---	15-25	---	10-20	---	---
serviceberry	AMELA	---	---	X	---	---	---
snowberry	SYMPH	---	---	---	2-8	---	---
Utah juniper	JUOS	---	---	X	---	---	---
singleleaf pinyon	PIMO	---	---	X	---	---	---
Range site number		028BY037NV	028BY087NV	028BY060NV	028BY015NV	028BY037NV	028BY022NV
Potential production (lb/acre):							
Favorable years		800	900	500	1500	800	3200
Normal years		600	700	300	1100	600	2000
Unfavorable years		400	450	250	700	400	1400

1111--PARISA GRAVELLY LOAM, 2 TO 8 PERCENT SLOPES

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions		
		Soil name or Inclusion number--		
		PARISA	Inclusion 1	Inclusion 2
Indian ricegrass	ORRY	20-30	20-35	20-30
Sandberg bluegrass	POSE	2-5	2-8	2-5
bottlebrush squirreltail	SIHY	2-8	2-5	2-8
needleandthread	STCO4	10-20	5-15	10-20
Wyoming big sagebrush	ARTRW	25-35	---	25-35
black sagebrush	ARARN	---	25-35	---
downy rabbitbrush	CRVIP4	---	2-5	---
rabbitbrush	CHRY99	2-5	---	2-5
shadscale	ATCO	---	2-5	---
Range site number		028BY010NV	028BY011NV	028BY010NV
Potential production (lb/acre):				
Favorable years		800	600	800
Normal years		600	450	600
Unfavorable years		400	250	400

1120--OKAN-AUTOMAL ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		OKAN	AUTOMAL	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	20-30	20-35	10-20	5-10	20-30
Sandberg bluegrass	FOSE	2-5	2-8	---	---	2-5
basin wildrye	ELCI2	---	---	---	10-20	---
bluebunch wheatgrass	AGSP	---	---	20-40	---	---
bottlebrush squirreltail	SIHY	2-8	2-5	---	---	2-5
muttongrass	POFE	---	---	2-8	---	---
needleandthread	STCO4	10-20	5-15	2-5	---	10-20
thickspike wheatgrass	AGDA	---	---	---	5-10	---
Wyoming big sagebrush	ARTRW	25-35	---	---	25-35	25-35
black sagebrush	ARARN	---	25-35	20-30	---	---
downy rabbitbrush	CHVIP4	---	2-5	---	---	---
rabbitbrush	CHRY99	2-5	---	---	---	---
shadscale	ATCO	---	2-5	---	---	---
winterfat	EULA5	---	---	2-5	---	---
Range site number		028BY010NV	028BY011NV	028BY006NV	028BY045NV	028BY080NV
Potential production (lb/acre):						
Favorable years		800	600	800	1000	600
Normal years		600	450	600	800	400
Unfavorable years		400	250	400	600	200

1150--ADOBE-WARDBAY-HAUNCHEE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		ADOBE	WARDBAY	HAUNCHEE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	2-5	---	---	---
Cusick bluegrass	FOCU3	---	---	---	---	---	---	5-10
Idaho fescue	FEID	5-30	5-15	---	2-10	---	---	50-65
Indian ricegrass	ORHY	---	---	2-5	---	---	---	---
Nevada bluegrass	PONE3	---	---	---	2-5	---	---	---
basin wildrye	ELCI2	---	2-8	---	---	---	---	---
bluebunch wheatgrass	AGSP	---	15-25	10-20	2-5	---	30-45	2-5
bluegrass	FOA++	5-15	---	---	---	---	---	---
mountain brome	BRCA5	---	5-10	---	5-15	---	---	---
muttongrass	POPE	---	---	2-8	---	---	5-10	---
needlegrass	STIPA	---	---	5-10	---	---	---	---
pine needlegrass	STPI2	---	---	---	---	---	2-8	---
slender wheatgrass	AGTR	---	---	---	5-15	---	---	---
spike-fescue	LEKI2	---	---	---	2-10	---	---	---
goldenweed	HAPLO2	2-5	---	---	---	---	2-8	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	2-5	---
Utah serviceberry	AMUT	---	2-8	---	1-5	---	---	---
antelope bitterbrush	PUTR2	---	2-10	---	1-5	---	---	---
black sagebrush	ARARN	---	---	---	---	---	35-45	---
common chokecherry	PRVI	---	---	---	1-5	---	---	---
mountain big sagebrush	ARVA2	---	10-20	15-25	5-15	---	---	2-8
sagebrush	ARTEM	30-35	---	---	---	---	---	---
snowberry	SYMPH	---	---	2-8	2-15	---	---	---
curlleaf mountainmahogany	CELE3	---	---	30-50	---	---	---	---
Range site number		025XY024NV	025XY042NV	028BY032NV	025XY004NV	None	028BY048NV	025XY010NV
Potential production (lb/acre):								
Favorable years		400	700	1300	2800		350	1200
Normal years		275	500	900	1800		200	800
Unfavorable years		150	300	600	1200		100	600

1161--PHARO-BOBS-POOKALOO ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		PHARO	BOBS	POOKALOO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	X	---	---
Indian ricegrass	ORHY	10-20	5-15	X	---	X	10-20	5-10
Sandberg bluegrass	POSE	---	---	---	---	X	---	---
Thurber needlegrass	STTH2	---	---	X	---	X	---	---
basin wildrye	ELCI2	---	2-5	X	2-8	X	---	10-20
bluebunch wheatgrass	AGSP	20-40	30-50	X	40-50	X	20-40	---
bluegrass	POA++	---	2-8	X	5-10	---	2-5	---
bottlebrush squirreltail	SIHY	---	---	X	---	X	---	---
muttongrass	POFE	2-8	---	---	---	---	---	---
needleandthread	STCO4	2-5	---	---	---	---	2-5	---
thickspike wheatgrass	AGDA	---	---	---	---	---	---	5-10
arrowleaf balsamroot	BASA3	---	---	X	---	X	---	---
goldenweed	HAPLO2	---	---	---	---	---	2-5	---
tapertip hawkbeard	CRAC2	---	---	X	---	X	2-5	---
Stanbury cliffrose	COMES	---	---	X	---	---	---	---
Utah serviceberry	AMUT	---	---	---	1-5	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	25-35
antelope bitterbrush	POTR2	---	---	X	2-10	X	---	---
big sagebrush	ARTR2	---	20-30	---	---	---	---	---
black sagebrush	ARARN	20-30	---	X	---	---	25-35	---
curlleaf mountainmahogany	CELE3	---	---	X	---	---	---	---
ephedra	EPHED	---	---	---	---	X	---	---
mountain big sagebrush	ARVA2	---	---	---	10-20	X	---	---
serviceberry	AMELA	---	---	X	---	X	---	---
shadscale	ATCO	---	---	---	---	---	2-5	---
snowberry	SYMPH	---	---	---	2-5	---	---	---
winterfat	EULAS	2-5	---	---	---	---	2-5	---
Utah juniper	JUOS	---	---	X	---	X	---	---
singleleaf pinyon	PIMO	---	---	X	---	X	---	---
Range site number		028BY006NV	028BY094NV	028BY060NV	028BY088NV	028BY062NV	028BY008NV	028BY045NV
Potential production (lb/acre):								
Favorable years		800	800	500	1100	700	600	1000
Normal years		600	600	300	900	500	400	800
Unfavorable years		400	400	250	700	300	200	600

1171--PYRAT-AUTOMAL-GRAVIER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		PYRAT	AUTOMAL	GRAVIER	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-30	20-35	40-50	20-30	20-30	20-30	15-25
Sandberg bluegrass	POSE	2-5	2-8	---	2-5	2-5	2-5	---
bottlebrush squirreltail	SIEY	2-8	2-5	2-5	2-8	2-5	2-8	5-10
needleandthread	STCO4	10-20	5-15	---	10-20	10-20	10-20	---
other perennial grasses	PPGG	---	---	---	---	---	---	2-5
globemallow	SPHAE	---	---	---	---	---	---	2-5
wyoming big sagebrush	ARTRW	25-35	---	---	25-35	25-35	25-35	---
black sagebrush	ARARN	---	25-35	---	---	---	---	---
bud sagebrush	ARSP5	---	---	5-15	---	---	---	2-8
downy rabbitbrush	CHVIP4	---	2-5	---	---	---	---	---
fourwing saltbush	ATCA2	---	---	---	---	---	---	2-5
rabbitbrush	CHRY89	2-5	---	---	2-5	---	2-5	---
shadscale	ATCO	---	2-5	---	---	---	---	---
winterfat	EULA5	---	---	20-30	---	---	---	40-50
Range site number		028BY010NV	028BY011NV	028BY084NV	028BY010NV	028BY080NV	028BY010NV	028BY013NV
Potential production (lb/acre):								
Favorable years		800	600	900	800	600	800	700
Normal years		600	450	700	600	400	600	500
Unfavorable years		400	250	400	400	200	400	350

1172--PYRAT-AUTOMAL, VERY STONY-AUTOMAL ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		PYRAT	AUTOMAL	AUTOMAL	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-30	20-35	20-35	20-30	10-20	2-10	---
Sandberg bluegrass	POSE	2-5	2-8	2-8	2-5	---	---	---
alkali sacaton	SPAI	---	---	---	---	---	---	15-40
basin wildrye	ELCI2	---	---	---	---	---	10-20	40-60
bluebunch wheatgrass	AGSP	---	---	---	---	20-40	---	---
hottelbrush squirreltail	SIHY	2-8	2-5	2-5	2-8	---	---	---
inland saltgrass	DISPS2	---	---	---	---	---	---	2-5
muttongrass	POPE	---	---	---	---	2-8	---	---
needleandthread	STCO4	10-20	5-15	5-15	10-20	2-5	---	---
western wheatgrass	AGSM	---	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	25-35	---	---	25-35	---	---	---
big sagebrush	ARTR2	---	---	---	---	---	20-30	---
black greasewood	SAVE4	---	---	---	---	---	30-40	5-15
black sagebrush	ARARN	---	25-35	25-35	---	20-30	---	---
downy rabbitbrush	CHVIP4	---	2-5	2-5	---	---	---	---
rabbitbrush	CHVYS9	2-5	---	---	2-5	---	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	---	2-5	2-5
shadscale	ATCO	---	2-5	2-5	---	---	---	---
winterfat	EULA5	---	---	---	---	2-5	---	---
Range site number		028BY010NV	028BY011NV	028BY011NV	028BY010NV	028BY006NV	028BY028NV	028BY004NV
Potential production (lb/acre):								
Favorable years		800	600	600	800	800	800	2200
Normal years		600	450	450	600	600	600	1500
Unfavorable years		400	250	250	400	400	400	800

1173--PYRAT-AUTOMAL ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		PYRAT	AUTOMAL	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	20-30	20-35	5-10	20-30	2-10
Sandberg bluegrass	POSE	2-5	2-8	---	2-5	---
basin wildrye	ELCI2	---	---	10-20	---	10-20
bottlebrush squirreltail	SIBY	2-8	2-5	---	2-8	---
needleandthread	STCO4	10-20	5-15	---	10-20	---
thickspike wheatgrass	AGDA	---	---	5-10	---	---
Wyoming big sagebrush	ARTRW	25-35	---	25-35	25-35	---
big sagebrush	ARTR2	---	---	---	---	20-30
black greasewood	SAVE4	---	---	---	---	30-40
black sagebrush	ARARN	---	25-35	---	---	---
downy rabbitbrush	CHVIP4	---	2-5	---	---	---
rabbitbrush	CHRY89	2-5	---	---	2-5	---
rubber rabbitbrush	CHNA2	---	---	---	---	2-5
shadscale	ATCO	---	2-5	---	---	---
Range site number		028BY010NV	028BY011NV	028BY045NV	028BY010NV	028BY028NV
Potential production (lb/acre):						
Favorable years		800	600	1000	800	800
Normal years		600	450	800	600	600
Unfavorable years		400	250	600	400	400

1174--PYRAT-TOSSER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		PYRAT	TOSSER	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	20-30	20-35	2-5	20-30	40-50
Sandberg bluegrass	POSE	2-5	2-8	---	2-5	---
Thurber needlegrass	STH2	---	---	30-40	---	---
bluebunch wheatgrass	AGSP	---	---	15-30	---	---
bluegrass	POA++	---	---	2-8	---	---
bottlebrush squirreltail	SIHY	2-8	2-5	---	2-8	2-5
needleandthread	STCO4	10-20	5-15	2-8	10-20	---
arrowleaf balsamroot	BASA3	---	---	2-5	---	---
globemallow	SPHAE	---	---	---	---	1-5
tapertip hawksbeard	CRAC2	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	25-35	---	---	25-35	---
antelope bitterbrush	PUTR2	---	---	2-10	---	---
big sagebrush	ARTR2	---	---	15-25	---	---
black sagebrush	ARARN	---	25-35	---	---	---
downy rabbitbrush	CEVIP4	---	2-5	---	---	---
rabbitbrush	CHRY9	2-5	---	---	2-5	---
shadscale	ATCO	---	2-5	---	---	25-35
winterfat	EULA5	---	---	---	---	5-10
Range site number		028BY010NV	028BY011NV	028BY007NV	028BY010NV	028BY075NV
Potential production (lb/acre):						
Favorable years		800	600	1000	800	700
Normal years		600	450	800	600	500
Unfavorable years		400	250	600	400	300

1180--HAUNCHEE-CAVEHILL ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		HAUNCHEE	CAVEHILL	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	15-25	X	---	---	5-15	---
Indian ricegrass	ORRY	---	---	---	---	---	2-5
Letterman needlegrass	STLE4	---	---	X	---	---	---
Nevada bluegrass	PONE3	---	X	---	---	---	---
arrowleaf balsamroot	BASA3	---	X	---	---	---	---
basin wildrye	ELCI2	---	X	---	---	2-8	---
bluebunch wheatgrass	AGSP	5-15	X	X	30-45	15-25	10-20
bluegrass	POA++	2-5	---	---	---	---	---
mountain brome	BRCAS	---	---	---	---	5-10	---
muttongrass	POPE	---	---	X	5-10	---	2-8
needlegrass	STIPA	2-8	---	---	---	---	5-10
pine needlegrass	STPI2	---	---	---	2-8	---	---
sedge	CAREX	---	---	X	---	---	---
spike-fescue	LEKI2	---	---	X	---	---	---
creeping barberry	BERE	---	---	X	---	---	---
goldenweed	HAPLO2	---	---	X	2-8	---	---
tapertip hawksbeard	CRAC2	---	X	---	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	2-5	---	---
Utah serviceberry	AMUT	---	X	---	---	2-8	---
antelope bitterbrush	PUTR2	2-5	X	---	---	2-10	---
black sagebrush	ARARN	---	---	---	15-45	---	---
common juniper	JUCO6	---	---	X	---	---	---
curlleaf mountainmahogany	CELE3	---	X	---	---	---	30-50
mountain big sagebrush	ARVA2	5-15	X	X	---	10-20	15-25
serviceberry	AMELA	---	---	X	---	---	---
snowberry	SYMPH	2-8	X	---	---	---	2-8
bristlecone pine	PIAR	---	---	X	---	---	---
curlleaf mountainmahogany	CELE3	---	X	---	---	---	30-50
limber pine	PIFL2	---	---	X	---	---	---
singleleaf pinyon	PIMO	---	X	---	---	---	---
white fir	ABCO	---	---	X	---	---	---
Range site number		025XY071NV	025XY061NV	028BY063NV	028BY048NV	025XY042NV	028BY032NV
Potential production (lb/acre):							
Favorable years		1700	500	800	350	700	1300
Normal years		1300	375	500	200	500	900
Unfavorable years		900	250	300	100	300	600

1181--HAUNCHEE-HALACAN-WARDBAY ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		HAUNCHEE	HALACAN	WARDBAY	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	---	---	2-5	---
Cusick bluegrass	POCU3	---	---	---	---	---	---	5-10
Idaho fescue	FEID	---	---	30-40	---	---	2-10	50-65
Letterman needlegrass	STLE4	---	---	---	X	---	---	---
Nevada bluegrass	PONE3	---	---	2-5	---	---	2-5	---
basin wildrye	ELCI2	---	---	2-10	---	---	---	---
bluebunch wheatgrass	AGSP	20-30	30-45	15-30	X	---	2-5	2-5
mountain brome	BRCA5	---	---	---	---	---	5-15	---
muttongrass	POPE	2-8	5-10	---	X	---	---	---
needlegrass	STIPA	5-15	---	---	---	---	---	---
pine needlegrass	STPI2	---	2-8	---	---	---	---	---
sedge	CAREX	---	---	---	X	---	---	---
slender wheatgrass	AGTR	---	---	---	---	---	5-15	---
spike-fescue	LEKI2	---	---	---	X	---	2-10	---
arrowleaf balsamroot	BASA3	---	---	2-5	---	---	---	---
creeping barberry	BERE	---	---	---	X	---	---	---
goldenweed	HAPLO2	---	2-8	---	X	---	---	---
tapertip hawkbeard	CRAC2	---	---	2-5	---	---	---	---
Douglas rabbitbrush	CHVI8	---	2-5	---	---	---	---	---
Utah serviceberry	AMUT	---	---	---	---	---	1-5	---
antelope bitterbrush	POTR2	---	---	5-10	---	---	1-5	---
black sagebrush	ARARN	---	35-45	---	---	---	---	---
common chokecherry	PRVI	---	---	---	---	---	1-5	---
common juniper	JUCO6	---	---	---	X	---	---	---
mountain big sagebrush	ARVA2	15-25	---	10-20	X	---	5-15	2-8
serviceberry	AMELA	---	---	---	X	---	---	---
snowberry	SYMPH	2-8	---	---	---	---	2-15	---
bristlecone pine	PIAR	---	---	---	X	---	---	---
curlleaf mountainmahogany	CELE3	15-25	---	---	---	---	---	---
limber pine	PIFL2	---	---	---	X	---	---	---
white fir	ABCO	---	---	---	X	---	---	---
Range site number		028BY043NV	028BY048NV	025XY012NV	028BY063NV	None	025XY004NV	025XY010NV
Potential production (lb/acre):								
Favorable years		1700	350	1400	800		2800	1200
Normal years		1300	200	1000	500		1800	800
Unfavorable years		900	100	700	300		1200	600

1190--UPATAD-ATLOW ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		UPATAD	ATLOW	UPATAD	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORBY	2-5	20-30	X	5-10	---	---	2-5
Scribner needlegrass	STSC2	---	---	---	---	---	---	2-10
Thurber needlegrass	STTH2	10-20	15-25	X	20-40	15-30	---	---
basin wildrye	ELCI2	---	---	X	---	2-8	---	---
bluebunch wheatgrass	AGSP	20-30	---	X	---	20-40	---	---
bluegrass	POA++	2-8	---	X	2-5	2-5	---	---
bottlebrush squirreltail	SIHY	---	---	X	---	---	---	---
needleandthread	STCO4	---	2-8	---	5-10	---	---	---
arrowleaf balsamroot	BASA3	---	---	X	---	---	---	---
crag aster	ASSC3	---	---	---	2-5	2-5	---	---
goldenweed	HAPLO2	---	---	---	---	---	---	2-5
tapertip hawkbeard	CRAC2	---	---	X	2-5	2-5	---	---
Stansbury cliffrose	COMES	---	---	X	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	20-30	---	---	---
antelope bitterbrush	PUTR2	---	---	X	---	5-10	---	---
black sagebrush	ARARN	25-35	20-35	X	---	---	---	2-8
curlleaf mountainmahogany	CELE3	---	---	X	---	---	---	---
desert snowberry	SYLO	---	---	---	---	---	---	2-8
littleleaf mountainmahogany	CEIN7	---	---	---	---	---	---	60-70
mountain big sagebrush	ARVA2	---	---	---	---	15-25	---	---
serviceberry	AMELA	---	---	X	---	---	---	---
spiny hopsage	GRSP	---	---	---	2-5	---	---	---
Utah juniper	JUOS	---	---	X	---	---	---	---
singleleaf pinyon	PIMO	---	---	X	---	---	---	---
Range site number		028BY093NV	028BY089NV	028BY060NV	028BY086NV	028BY087NV	None	028BY066NV
Potential production (lb/acre):								
Favorable years		800	450	500	800	900		1300
Normal years		600	300	300	600	700		1000
Unfavorable years		400	150	250	350	450		800

1191--UPATAD-PIOCHE-ROCK OUTCROP ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		UPATAD	PIOCHE	ROCK OUTCROP	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	X	---	---	---	---
Indian ricegrass	ORRY	2-5	X	---	---	2-5	5-10
Sandberg bluegrass	POSE	---	X	---	---	---	---
Thurber needlegrass	STH2	10-20	X	---	15-30	30-40	---
basin wildrye	ELCI2	---	X	---	2-8	---	10-20
bluebunch wheatgrass	AGSP	20-30	X	---	20-40	15-30	---
bluegrass	POA++	2-8	---	---	2-5	2-8	---
bottlebrush squirreltail	SIHY	---	X	---	---	---	---
needleandthread	STCO4	---	---	---	---	2-8	---
thickspike wheatgrass	AGDA	---	---	---	---	---	5-10
arrowleaf balsamroot	BASA3	---	X	---	---	2-5	---
crag aster	ASSC3	---	---	---	2-5	---	---
tapertip hawksbeard	CRAC2	---	X	---	2-5	2-5	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	25-35
antelope bitterbrush	POTR2	---	X	---	5-10	2-10	---
big sagebrush	ARTR2	---	---	---	---	15-25	---
black sagebrush	ARARN	25-35	---	---	---	---	---
ephedra	EPHED	---	X	---	---	---	---
mountain big sagebrush	ARVA2	---	X	---	15-25	---	---
serviceberry	AMELA	---	X	---	---	---	---
Utah juniper	JUOS	---	X	---	---	---	---
singleleaf pinyon	PIMO	---	X	---	---	---	---
Range site number		028BY093NV	028BY062NV	None	028BY087NV	028BY007NV	028BY045NV
Potential production (lb/acre):							
Favorable years		800	700		900	1000	1000
Normal years		600	500		700	800	800
Unfavorable years		400	300		450	600	600

1200--HARDOL-HARDZEM-ROCK OUTCROP ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		HARDOL	HARDZEM	ROCK OUTCROP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	X	---	---	---
Indian ricegrass	ORHY	2-5	---	---	---	X	---	---
Letterman needlegrass	STLE4	---	X	---	---	---	---	---
Sandberg bluegrass	POSE	---	---	---	X	---	---	---
Thurber needlegrass	STTH2	5-10	---	---	---	X	---	---
basin wildrye	ELCI2	---	---	---	X	X	---	---
bluebunch wheatgrass	AGSP	5-10	X	---	X	X	20-30	30-45
bluegrass	POA++	2-8	---	---	---	X	---	---
bottlebrush squirreltail	SIHY	2-5	---	---	X	X	---	---
muttongrass	POPE	---	X	---	X	---	2-8	5-10
needlegrass	STIPA	---	---	---	---	---	5-15	---
pine needlegrass	STPI2	---	---	---	---	---	---	2-8
sedge	CAREX	---	X	---	---	---	---	---
spike-fescue	LEKI2	---	X	---	---	---	---	---
arrowleaf balsamroot	BASA3	---	---	---	X	X	---	---
creeping barberry	BERE	---	X	---	---	---	---	---
goldenweed	HAPLO2	---	X	---	---	---	---	2-8
tapertip hawksbeard	CRAC2	---	---	---	X	X	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	---	2-5
Stansbury cliffrose	COMES	---	---	---	---	X	---	---
antelope bitterbrush	PUTR2	---	---	---	X	X	---	---
black sagebrush	ARARN	---	---	---	---	X	---	35-45
common juniper	JUCO6	---	X	---	---	---	---	---
curlleaf mountainmahogany	CELE3	50-70	---	---	X	X	15-25	---
mountain big sagebrush	ARVA2	2-5	X	---	X	---	15-25	---
serviceberry	AMELA	---	X	---	X	X	---	---
snowberry	SYMPH	---	---	---	X	---	2-8	---
Utah juniper	JUOS	---	---	---	X	X	---	---
bristlecone pine	FIAR	---	X	---	---	---	---	---
curlleaf mountainmahogany	CELE3	50-70	---	---	X	X	15-25	---
limber pine	FIFL2	---	X	---	---	---	---	---
singleleaf pinyon	FIMO	---	---	---	X	X	---	---
white fir	ABCO	---	X	---	---	---	---	---
Range site number		028BY041NV	028BY063NV	None	028BY058NV	028BY060NV	028BY043NV	028BY048NV
Potential production (lb/acre):								
Favorable years		3000	800		500	500	1700	350
Normal years		2400	500		300	300	1300	200
Unfavorable years		1700	300		200	250	900	100

1201--HARDOL-ROCK OUTCROP-WARDBAY ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		HARDOL	ROCK OUTCROP	WARDBAY	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
canby bluegrass	POCA	---	---	5-15	---	---	X	---
Indian ricegrass	ORHY	2-5	---	---	---	---	---	---
letterman needlegrass	STLE4	---	---	---	---	X	---	---
sandberg bluegrass	POSE	---	---	---	---	---	X	---
thurber needlegrass	STTH2	5-10	---	---	---	---	---	---
basin wildrye	ELCT2	---	---	---	---	---	X	---
bluebunch wheatgrass	AGSP	5-10	---	60-80	20-30	X	X	30-45
bluegrass	POA++	2-8	---	---	---	---	---	---
bottlebrush squirreltail	SIHY	2-5	---	---	---	---	X	---
muttongrass	POPE	---	---	---	2-8	X	X	5-10
needlegrass	STIPA	---	---	---	5-15	---	---	---
pine needlegrass	STPI2	---	---	---	---	---	---	2-8
sedge	CAREX	---	---	---	---	X	---	---
spike-fescue	LEKI2	---	---	1-10	---	X	---	---
arrowleaf balsamroot	BASA3	---	---	---	---	---	X	---
creeping barberry	BERE	---	---	---	---	X	---	---
goldenweed	HAPLO2	---	---	---	---	X	---	2-8
tapertip hawkbeard	CRAC2	---	---	---	---	---	X	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	---	2-5
antelope bitterbrush	PUTR2	---	---	---	---	---	X	---
black sagebrush	ARARN	---	---	---	---	---	---	35-45
common juniper	JUCO6	---	---	---	---	X	---	---
curlleaf mountainmahogany	CELE3	50-70	---	---	15-25	---	X	---
mountain big sagebrush	ARVA2	2-5	---	10-20	15-25	X	X	---
serviceberry	AMELA	---	---	---	---	X	X	---
snowberry	SYMPH	---	---	2-8	2-8	---	X	---
Utah juniper	JUOS	---	---	---	---	---	X	---
bristlecone pine	PIAR	---	---	---	---	X	---	---
curlleaf mountainmahogany	CELE3	50-70	---	---	15-25	---	X	---
limber pine	PIFL2	---	---	---	---	X	---	---
singleleaf pinyon	PIMO	---	---	---	---	---	X	---
white fir	ABCO	---	---	---	---	X	---	---
Range site number		028BY042NV	None	028BY070NV	028BY043NV	028BY063NV	028BY058NV	028BY048NV
Potential production (lb/acre):								
Favorable years		3000		1100	1700	800	500	350
Normal years		2400		900	1300	500	300	200
Unfavorable years		1700		600	900	300	200	100

1210--BLIMO-KUNZLER-LINOYER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		BLIMO	KUNZLER	LINOYER	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	15-25	---	15-25	20-30	40-50	2-10	1-5
Sandberg bluegrass	POSE	---	5-10	---	2-5	---	---	---
basin wildrye	ELCI2	5-10	---	---	---	---	10-20	---
bottlebrush squirreltail	SIHY	2-8	5-15	5-10	2-8	2-5	---	5-10
needleandthread	STCO4	---	---	---	10-20	---	---	---
other perennial grasses	PPGG	---	---	2-5	---	---	---	---
wheatgrass	AGROP2	5-15	---	---	---	---	---	---
globemallow	SPHAE	---	---	2-5	---	1-5	---	---
Wyoming big sagebrush	ARTRW	30-45	60-70	---	25-35	---	---	---
big sagebrush	ARTR2	---	---	---	---	---	20-30	---
black greasewood	SAVE4	---	---	---	---	---	30-40	---
bud sagebrush	ARSF5	---	---	2-8	---	---	---	---
fourwing saltbush	ATCA2	---	---	2-5	---	---	---	---
rabbitbrush	CHRY99	---	---	---	2-5	---	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	---	2-5	---
shadscale	ATCO	---	---	---	---	25-35	---	85-90
winterfat	EULA5	2-8	---	40-50	---	5-10	---	---
Range site number		028BY014NV	028BY056NV	028BY013NV	028BY010NV	028BY075NV	028BY028NV	028BY073NV
Potential production (lb/acre):								
Favorable years		600	450	700	800	700	800	400
Normal years		450	325	500	600	500	600	300
Unfavorable years		200	150	350	400	300	400	200

1213--BLIMO-THREESSEE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		BLIMO	THREESSEE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-30	20-30	20-30	10-20	20-30	2-10
Sandberg bluegrass	POSE	2-5	2-5	---	2-5	2-5	---
basin wildrye	ELCI2	---	---	---	---	---	10-20
bottlebrush squirreltail	SIHY	2-8	2-8	10-20	2-5	2-5	---
needleandthread	STCO4	10-20	10-20	---	10-20	10-20	---
globemallow	SPHAE	---	---	2-4	---	---	---
wyoming big sagebrush	ARTRW	25-35	25-35	---	---	25-35	---
big sagebrush	ARTR2	---	---	---	---	---	20-30
black greasewood	SAVE4	---	---	---	---	---	30-40
black sagebrush	ARARN	---	---	---	35-45	---	---
rabbitbrush	CHRY9	2-5	2-5	---	---	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	---	2-5
shadscale	ATCO	---	---	45-50	2-5	---	---
Range site number		028BY010NV	028BY010NV	028BY009NV	028BY016NV	028BY080NV	028BY028NV
Potential production (lb/acre):							
Favorable years		800	800	500	350	600	800
Normal years		600	600	400	225	400	600
Unfavorable years		400	400	300	100	200	400

1215--BLIMO-ZORRAVISTA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		BLIMO	ZORRAVISTA	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-30	10-25	20-30	10-20	1-5	15-25
Sandberg bluegrass	POSE	2-5	---	2-5	2-5	---	---
bottlebrush squirreltail	SIEY	2-8	---	2-8	2-5	5-10	2-5
needleandthread	STCO4	10-20	2-5	10-20	10-20	---	5-10
other perennial grasses	PPGG	---	2-8	---	---	---	---
thickspike wheatgrass	AGDA	---	5-15	---	---	---	---
scarlet globemallow	SPCO	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	25-35	---	25-35	---	---	20-35
big sagebrush	ARTR2	---	30-40	---	---	---	---
black sagebrush	ARARN	---	---	---	35-45	---	---
fourwing saltbush	ATCA2	---	5-15	---	---	---	---
rabbitbrush	CHRY89	2-5	---	2-5	---	---	---
rubber rabbitbrush	CHNA2	---	2-5	---	---	---	---
shadscale	ATCO	---	---	---	2-5	85-90	2-5
spiny hopsage	GRSP	---	5-10	---	---	---	5-20
Range site number		028BY010NV	028BY068NV	028BY010NV	028BY016NV	028BY073NV	028BY052NV
Potential production (lb/acre):							
Favorable years		800	800	800	350	400	800
Normal years		600	500	600	225	300	600
Unfavorable years		400	300	400	100	200	450

1216--BLIMO-IDWAY-MAZUMA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		BLIMO	IDWAY	MAZUMA	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	20-30	20-30	1-5	20-30	2-8	---	2-10
Sandberg bluegrass	POSE	2-5	2-5	---	2-5	---	5-10	---
basin wildrye	ELCI2	---	---	---	---	---	---	10-20
bottlebrush squirreltail	SIHY	2-8	2-8	5-10	2-8	2-5	5-15	---
needleandthread	STCO4	10-20	10-20	---	10-20	---	---	---
western wheatgrass	AGSM	---	---	---	---	5-15	---	---
Wyoming big sagebrush	ARTRW	25-35	25-35	---	25-35	---	60-70	---
big sagebrush	ARTR2	---	---	---	---	---	---	20-30
black greasewood	SAVE4	---	---	---	---	---	---	30-40
rabbitbrush	CHRY59	2-5	2-5	---	2-5	---	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	---	---	2-5
shadscale	ATCO	---	---	85-90	---	2-5	---	---
sickle saltbush	ATFA	---	---	---	---	55-65	---	---
winterfat	EULA5	---	---	---	---	5-15	---	---
Range site number		028BY010NV	028BY010NV	028BY073NV	028BY010NV	028BY047NV	028BY056NV	028BY028NV
Potential production (lb/acre):								
Favorable years		800	800	400	800	500	450	800
Normal years		600	600	300	600	350	325	600
Unfavorable years		400	400	200	400	200	150	400

1220--ONKEYO-ADOBE-POOKALOO ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or inclusion number--					
		ONKEYO	ADOBE	POOKALOO	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	15-30	---	X	10-20	---	5-15
Thurber needlegrass	STTH2	---	---	X	---	---	---
basin wildrye	ELCI2	---	---	X	---	---	2-5
bluebunch wheatgrass	AGSP	30-40	60-80	X	20-40	20-30	30-50
bluegrass	POA++	5-10	---	X	2-5	---	2-8
bottlebrush squirreltail	SITHY	---	---	X	---	---	---
muttongrass	POPE	---	2-10	---	---	2-8	---
needleandthread	STCO4	---	---	---	2-5	---	2-5
needlegrass	STIPA	---	---	---	---	5-15	---
arrowleaf balsamroot	BASA3	---	---	X	---	---	---
goldenweed	HAPLO2	---	2-5	---	2-5	---	---
tapertip hawkbeard	CRAC2	---	---	X	2-5	---	---
Stansbury cliffrose	COMES	---	---	X	---	---	---
antelope bitterbrush	PUTR2	5-10	---	X	---	---	---
big sagebrush	ARTR2	---	---	---	---	---	20-30
black sagebrush	ARARN	---	25-35	X	25-35	---	---
curlleaf mountainmahogany	CELE3	---	---	X	---	15-25	---
mountain big sagebrush	ARVA2	15-25	---	---	---	15-25	---
serviceberry	AMELA	---	---	X	---	---	---
shadscale	ATCO	---	---	---	2-5	---	---
snowberry	SYMPH	---	---	---	---	2-8	---
winterfat	EULA5	---	---	---	2-5	---	---
Utah juniper	JUOS	---	---	X	---	---	---
curlleaf mountainmahogany	CELE3	---	---	X	---	15-25	---
singleleaf pinyon	PIMO	---	---	X	---	---	---
Range site number		028BY079NV	028BY027NV	028BY060NV	028BY008NV	028BY043NV	028BY094NV
Potential production (lb/acre):							
Favorable years		700	600	500	600	1700	800
Normal years		500	450	300	400	1300	600
Unfavorable years		300	300	250	200	900	400

1230--HARDZEM-HAUNCHEE-WARDBAY ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		HARDZEM	HAUNCHEE	WARDBAY	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	---	---	2-5	---
Cusick bluegrass	POCU3	---	---	---	---	5-10	---	---
Idaho fescue	FEID	---	---	5-15	---	50-65	2-10	---
Indian ricegrass	ORHY	---	2-5	---	---	---	---	---
Letterman needlegrass	STLE4	X	---	---	---	---	---	40-60
Nevada bluegrass	PONE3	---	---	---	---	---	2-5	---
basin wildrye	ELCI2	---	---	2-8	---	---	---	---
bluebunch wheatgrass	AGSP	X	10-20	15-25	---	2-5	2-5	---
mountain brome	BRCA5	---	---	5-10	---	---	5-15	---
muttongrass	POPE	X	2-8	---	---	---	---	---
needlegrass	STIPA	---	5-10	---	---	---	---	---
sedge	CAREX	X	---	---	---	---	---	---
slender wheatgrass	AGTR	---	---	---	---	---	5-15	---
spike-fescue	LEKI2	X	---	---	---	---	2-10	---
creeping barberry	BERE	X	---	---	---	---	---	---
goldenweed	HAPLO2	X	---	---	---	---	---	---
tailcup lupine	LUCA	---	---	---	---	---	---	20-40
Utah serviceberry	AMUT	---	---	2-8	---	---	1-5	---
antelope bitterbrush	PUTR2	---	---	2-10	---	---	1-5	---
common chokecherry	PRVI	---	---	---	---	---	1-5	---
common juniper	JUCO6	X	---	---	---	---	---	---
mountain big sagebrush	ARVA2	X	15-25	10-20	---	2-8	5-15	---
serviceberry	AMELA	X	---	---	---	---	---	---
snowberry	SYMPH	---	2-8	---	---	---	2-15	---
bristlecone pine	PIAR	X	---	---	---	---	---	---
curlleaf mountainmahogany	CELE3	---	30-50	---	---	---	---	---
limber pine	PIFL2	X	---	---	---	---	---	---
white fir	ABCO	X	---	---	---	---	---	---
Range site number		028BY063NV	028BY032NV	025XY042NV	None	025XY010NV	025XY004NV	025XY028NV
Potential production (lb/acre):								
Favorable years		800	1300	700		1200	2800	1700
Normal years		500	900	500		800	1800	1400
Unfavorable years		300	600	300		600	1200	1100

1240--BENIN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		BENIN	BENIN	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORRY	---	---	2-5	2-8	---
alkali sacaton	SPAI	5-10	5-10	---	---	---
basin wildrye	ELCI2	2-5	2-5	---	---	---
bottlebrush squirreltail	SIBY	---	---	2-5	2-5	5-10
inland saltgrass	DISPS2	2-8	2-8	---	---	---
western wheatgrass	AGSM	---	---	---	5-15	2-5
black greasewood	SAVE4	60-75	60-75	20-30	---	15-25
bud sagebrush	ARSP5	---	---	2-10	---	---
rubber rabbitbrush	CHNA2	2-5	2-5	---	---	---
shadscale	ATCO	2-5	2-5	20-50	2-5	2-5
sickle saltbush	ATFA	---	---	---	55-65	50-60
winterfat	EULA5	---	---	---	5-15	---
Range site number		028BY020NV	028BY020NV	028BY074NV	028BY047NV	028BY097NV
Potential production (lb/acre):						
Favorable years		500	500	600	500	500
Normal years		300	300	400	350	350
Unfavorable years		150	150	200	200	200

1241--BENIN, MOIST-PLAYAS-BENIN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		BENIN	PLAYAS	BENIN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	---	---	---	---	5-10	---	2-5
alkali sacaton	SPAI	---	---	5-10	---	---	---	---
basin wildrye	ELCI2	10-20	---	2-5	2-5	2-5	---	---
bluegrass	POA++	---	---	---	25-40	---	---	---
bottlebrush squirreltail	SIHY	2-5	---	---	---	---	---	2-5
inland saltgrass	DISPS2	2-10	---	2-8	---	---	75-95	---
mat muhly	MURI	---	---	---	2-5	---	---	---
rush	JuncU	---	---	---	5-15	---	---	---
sedge	CAREX	---	---	---	20-30	---	---	---
thickspike wheatgrass	AGDA	---	---	---	---	2-5	---	---
cinquefoil	POTEN	---	---	---	2-5	---	---	---
groundsel	SENEC	---	---	---	2-5	---	---	---
black greasewood	SAVE4	50-60	---	60-75	---	40-60	---	20-30
bud sagebrush	ARSP5	---	---	---	---	---	---	2-10
fourwing saltbush	ATCA2	---	---	---	---	5-10	---	---
rubber rabbitbrush	CBNA2	---	---	2-5	---	---	---	---
shadscale	ATCO	---	---	2-5	---	5-10	---	20-50
Range site number		028BY069NV	None	028BY020NV	028BY001NV	028BY021NV	028BY050NV	028BY074NV
Potential production (lb/acre):								
Favorable years		800		500	4000	400	1200	600
Normal years		600		300	2000	300	1000	400
Unfavorable years		400		150	1200	200	800	200

1250--TECOMar-POOKALOO ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		TECOMar	POOKALOO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	---	---	---	---	X	---
Indian ricegrass	ORHY	10-20	X	---	---	---	---
Sandberg bluegrass	POSE	---	---	---	---	X	---
Thurber needlegrass	STTH2	---	X	---	---	---	---
basin wildrye	ELCI2	---	X	20-40	2-8	X	---
bluebunch wheatgrass	AGSP	20-40	X	---	40-50	X	---
bluegrass	POA++	2-5	X	5-15	5-10	---	---
bottlebrush squirreltail	SIHY	---	X	---	---	X	---
muttongrass	POPE	---	---	---	---	X	---
needleandthread	STCO4	2-5	---	10-20	---	---	---
thickspike wheatgrass	AGDA	---	---	5-15	---	---	---
arrowleaf balsamroot	BASA3	---	X	---	---	X	---
goldenweed	HAPLO2	2-5	---	---	---	---	---
tapertip hawkbeard	CRAC2	2-5	X	---	---	X	---
Stansbury cliffrose	COMES	---	X	---	---	---	---
Utah serviceberry	AMUT	---	---	---	1-5	---	---
antelope bitterbrush	POTR2	---	X	---	2-10	X	---
big sagebrush	ARTR2	---	---	10-20	---	---	---
black sagebrush	ARAR2	25-35	X	---	---	---	---
curleaf mountainmahogany	CELE3	---	X	---	---	X	---
mountain big sagebrush	ARVA2	---	---	---	10-20	X	---
rabbithrush	CHRY89	---	---	2-5	---	---	---
serviceberry	AMELA	---	X	---	---	X	---
shadscale	ATCO	2-5	---	---	---	---	---
snowberry	SYMPH	---	---	---	2-5	X	---
winterfat	EULA5	2-5	---	---	---	---	---
Utah juniper	JUOS	---	X	---	---	X	---
singleleaf pinyon	PIMO	---	X	---	---	X	---
Range site number		028BY008NV	028BY060NV	028BY082NV	028BY088NV	028BY058NV	None
Potential production (lb/acre):							
Favorable years		600	500	1400	1100	500	
Normal years		400	300	1100	900	300	
Unfavorable years		200	250	900	700	200	

1270--KATELANA-SHEFFIT ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		KATELANA	SHEFFIT	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	2-5	2-10	---	2-10	2-5	---
alkali sacaton	SPAI	---	---	15-40	---	---	---
basin wildrye	ELCI2	---	10-20	40-60	10-20	---	---
bottlebrush squirreltail	SIHY	2-5	---	---	---	2-5	---
inland saltgrass	DISPS2	---	---	2-5	---	---	---
western wheatgrass	AGSM	---	---	2-5	---	---	---
big sagebrush	ARTR2	---	20-30	---	20-30	---	---
black greasewood	SAVE4	20-30	30-40	5-15	30-40	20-30	---
bud sagebrush	ARSP5	2-10	---	---	---	2-10	---
rubber rabbitbrush	CHNA2	---	2-5	2-5	2-5	---	---
shadscale	ATCO	20-50	---	---	---	20-50	---
Range site number		028BY074NV	028BY028NV	028BY004NV	028BY028NV	028BY074NV	None
Potential production (lb/acre):							
Favorable years		600	800	2200	800	600	
Normal years		400	600	1500	600	400	
Unfavorable years		200	400	800	400	200	

1271--UVADA-RAGTOWN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		UVADA	RAGTOWN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORBY	2-5	---	2-10	2-8	5-10	---
alkali sacaton	SPAI	---	---	---	---	---	5-10
basin wildrye	ELCI2	---	---	10-20	---	2-5	2-5
bottlebrush squirreltail	SIHY	2-5	5-10	---	2-5	---	---
inland saltgrass	DISP62	---	---	---	---	---	2-8
thickspike wheatgrass	AGDA	---	---	---	---	2-5	---
western wheatgrass	AGSM	---	2-5	---	5-15	---	---
big sagebrush	ARTR2	---	---	20-30	---	---	---
black greasewood	SAVE4	20-30	15-25	30-40	---	40-60	60-75
bud sagebrush	ARSP5	2-10	---	---	---	---	---
fourwing saltbush	ATCA2	---	---	---	---	5-10	---
rubber rabbitbrush	CHNA2	---	---	2-5	---	---	2-5
shadscale	ATCO	20-50	2-5	---	2-5	5-10	2-5
sickle saltbush	ATFA	---	50-60	---	55-65	---	---
winterfat	EULA5	---	---	---	5-15	---	---
Range site number		028BY074NV	028BY097NV	028BY028NV	028BY047NV	028BY021NV	028BY020NV
Potential production (lb/acre):							
Favorable years		600	500	800	500	400	500
Normal years		400	350	600	350	300	300
Unfavorable years		200	200	400	200	200	150

1272--KATELANA, COOL-KAWICH ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		KATELANA	KAWICH	Inclusion 1	Inclusion 2
Indian ricegrass	ORRY	2-5	5-10	---	10-20
basin wildrye	ELCI2	---	2-5	---	---
bottlebrush squirreltail	SIHY	2-5	---	---	5-15
thickspike wheatgrass	AGDA	---	2-5	---	---
black greasewood	SAVE4	20-30	40-60	---	---
bud sagebrush	ARSP5	2-10	---	---	10-25
fourwing saltbush	ATCA2	---	5-10	---	---
shadscale	ATCO	20-50	5-10	---	40-50
Range site number		028BY074NV	028BY021NV	None	028BY017NV
Potential production (lb/acre):					
Favorable years		600	400		400
Normal years		400	300		300
Unfavorable years		200	200		200

1280--SYCOMAT-KUNZLER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		SYCOMAT	KUNZLER	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	2-5	2-10	2-10	20-30	---	2-5
Sandberg bluegrass	POSE	---	---	---	2-5	---	---
alkali sacaton	SPAI	---	---	---	---	5-10	---
basin wildrye	ELCI2	---	10-20	10-20	---	2-5	---
bottlebrush squirreltail	SIHY	2-5	---	---	2-8	---	2-5
inland saltgrass	DISPS2	---	---	---	---	2-8	---
needleandthread	STCO4	---	---	---	10-20	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	---
big sagebrush	ARTR2	---	20-30	20-30	---	---	---
black greasewood	SAVE4	20-30	30-40	30-40	---	60-75	20-30
bud sagebrush	ARSP5	2-10	---	---	---	---	2-10
rabbitbrush	CHRY89	---	---	---	2-5	---	---
rubber rabbitbrush	CHNA2	---	2-5	2-5	---	2-5	---
shadscale	ATCO	20-50	---	---	---	2-5	20-50
Range site number		028BY074NV	028BY028NV	028BY028NV	028BY010NV	028BY020NV	028BY074NV
Potential production (lb/acre):							
Favorable years		600	800	800	800	500	600
Normal years		400	600	600	600	300	400
Unfavorable years		200	400	400	400	150	200

1281--SYCOMAT-MAZUMA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		SYCOMAT	MAZUMA	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	2-5	20-30	2-10	20-30	2-8	20-30
Sandberg bluegrass	POSE	---	---	---	2-5	---	2-5
basin wildrye	ELCI2	---	---	10-20	---	---	---
bottlebrush squirreltail	SIHY	2-5	10-20	---	2-8	2-5	2-8
needleandthread	STCO4	---	---	---	10-20	---	10-20
western wheatgrass	AGSM	---	---	---	---	5-15	---
globemallow	SPHAE	---	2-4	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	25-35
big sagebrush	ARTR2	---	---	20-30	---	---	---
black greasewood	SAVE4	20-30	---	30-40	---	---	---
bud sagebrush	ARSP5	2-10	---	---	---	---	---
rabbitbrush	CHRY89	---	---	---	2-5	---	2-5
rubber rabbitbrush	CHNA2	---	---	2-5	---	---	---
shadscale	ATCO	20-50	45-50	---	---	2-5	---
sickle saltbush	ATFA	---	---	---	---	55-65	---
winterfat	EULA5	---	---	---	---	5-15	---
Range site number		028BY074NV	028BY009NV	028BY028NV	028BY010NV	028BY047NV	028BY010NV
Potential production (lb/acre):							
Favorable years		600	500	800	800	500	800
Normal years		400	400	600	600	350	600
Unfavorable years		200	300	400	400	200	400

1290--HEIST-BLIMO ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		HEIST	BLIMO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	40-50	20-30	15-25	20-30	5-10	10-20
Sandberg bluegrass	POSE	---	2-5	---	2-5	---	---
basin wildrye	ELCY2	---	---	---	---	10-20	---
bottlebrush squirreltail	SIHY	2-5	2-8	5-10	2-5	---	5-15
needleandthread	STCO4	---	10-20	---	10-20	---	---
other perennial grasses	PFGG	---	---	2-5	---	---	---
thickspike wheatgrass	AGDA	---	---	---	---	5-10	---
globemallow	SPHAE	---	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	---	25-35	---	25-35	25-35	---
bud sagebrush	ARSP5	5-15	---	2-8	---	---	10-25
fourwing saltbush	ATCA2	---	---	2-5	---	---	---
rabbitbrush	CHRY89	---	2-5	---	---	---	---
shadscale	ATCO	---	---	---	---	---	40-50
winterfat	BULA5	20-30	---	40-50	---	---	---
Range site number		028BY084NV	028BY010NV	028BY013NV	028BY080NV	028BY045NV	028BY017NV
Potential production (lb/acre):							
Favorable years		900	800	700	600	1000	400
Normal years		700	600	500	400	800	300
Unfavorable years		400	400	350	200	600	200

1300--CAVEHILL-HAUNCHEE-HARDZEM ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable. Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		CAVEHILL	HAUNCHEE	HARDZEM	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Canby bluegrass	POCA	X	---	---	---	---	---	---
Idaho fescue	FEID	---	---	---	5-15	---	5-30	---
Indian ricegrass	ORHY	---	---	---	---	X	---	---
Letterman needlegrass	STLE4	---	---	X	---	---	---	---
Sandberg bluegrass	POSE	X	---	---	---	---	---	---
Thurber needlegrass	STTH2	---	---	---	---	X	---	---
basin wildrye	ELCI2	X	---	---	2-8	X	---	---
bluebunch wheatgrass	AGSP	X	20-30	X	15-25	X	---	30-45
bluegrass	POA++	---	---	---	---	X	5-15	---
bottlebrush squizreltail	SIHY	X	---	---	---	X	---	---
mountain brome	BRCA5	---	---	---	5-10	---	---	---
muttongrass	POPE	X	2-8	X	---	---	---	5-10
needlegrass	STIPA	---	5-15	---	---	---	---	---
pine needlegrass	STPI2	---	---	---	---	---	---	2-8
sedge	CAREX	---	---	X	---	---	---	---
spike-fescue	LEKI2	---	---	X	---	---	---	---
arrowleaf balsamroot	BASA3	X	---	---	---	X	---	---
creeping barberry	BERE	---	---	X	---	---	---	---
goldenweed	HAFLO2	---	---	X	---	---	2-5	2-8
tapertip hawksbeard	CRAC2	X	---	---	---	X	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	---	2-5
Stansbury cliffrose	COMES	---	---	---	2-8	X	---	---
Utah serviceberry	AMUT	---	---	---	2-10	X	---	---
antelope bitterbrush	POTR2	X	---	---	---	X	---	---
black sagebrush	ARARN	---	---	---	---	X	---	35-45
common juniper	JUCO6	---	---	X	---	---	---	---
curlleaf mountainmahogany	CELE3	X	15-25	---	---	X	---	---
mountain big sagebrush	ARVA2	X	15-25	X	10-20	---	---	---
sagebrush	ARTEM	---	---	---	---	---	30-35	---
serviceberry	AMELA	X	---	X	---	X	---	---
snowberry	SYMPH	X	2-8	---	---	---	---	---
Utah juniper	JUOS	X	---	---	---	X	---	---
bristlecone pine	PIAR	---	---	X	---	---	---	---
curlleaf mountainmahogany	CELE3	X	15-25	---	---	X	---	---
limber pine	PIPL2	---	---	X	---	---	---	---
singleleaf pinyon	PIMO	X	---	---	---	X	---	---
white fir	ABCO	---	---	X	---	---	---	---

Range site number	028BY058NV	028BY043NV	028BY063NV	025XY042NV	028BY060NV	025XY024NV	028BY048NV
Potential production (lb/acre):							
Favorable years	500	1700	800	700	500	400	350
Normal years	300	1300	500	500	300	275	200
Unfavorable years	200	900	300	300	250	150	100

1360--TOBA-APPIAN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		TOBA	APPIAN	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	---	2-10	2-5	---
alkali sacaton	SPAI	20-30	5-15	---	---	15-40
basin wildrye	ELCT2	2-5	2-8	10-20	---	40-60
bluegrass	POA++	---	25-50	---	---	---
bottlebrush squirreltail	SIHY	---	---	---	2-5	---
inland saltgrass	DISPS2	---	---	---	---	2-5
mat muhly	MURI	30-40	30-40	---	---	---
rush	JunCU	5-10	---	---	---	---
western wheatgrass	AGSM	---	2-8	---	---	2-5
aster	ASTER	2-5	---	---	---	---
Douglas rabbitbrush	CHVI8	1-5	---	---	---	---
basin big sagebrush	ARTRT	2-5	---	---	---	---
big sagebrush	ARTR2	---	---	20-30	---	---
black greasewood	SAVE4	1-5	---	30-40	20-30	5-15
bud sagebrush	ARSP5	---	---	---	2-10	---
rubber rabbitbrush	CHNA2	5-10	---	2-5	---	2-5
shadscale	ATCO	---	---	---	20-50	---
Range site number		028BY031NV	028BY100NV	028BY028NV	028BY074NV	028BY004NV
Potential production (lb/acre):						
Favorable years		1200	1500	800	600	2200
Normal years		1000	1100	600	400	1500
Unfavorable years		400	700	400	200	800

1370--ORUPA-PLAYAS-BOOFUSS ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		ORUPA	PLAYAS	BOOFUSS	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	---	---	---	2-5	2-10	---
alkali sacaton	SPAI	5-10	---	---	15-40	---	---	---
basin wildrye	ELCI2	2-5	---	10-20	40-60	---	10-20	---
bottlebrush squirreltail	SIHY	---	---	2-5	---	2-5	---	---
inland saltgrass	DISPS2	2-8	---	2-10	2-5	---	---	75-95
western wheatgrass	AGSM	---	---	---	2-5	---	---	---
big sagebrush	ARTR2	---	---	---	---	---	20-30	---
black greasewood	SAVE4	60-75	---	50-60	5-15	20-30	30-40	---
bud sagebrush	ARSP5	---	---	---	---	2-10	---	---
rubber rabbitbrush	CHNA2	2-5	---	---	2-5	---	2-5	---
shadscale	ATCO	2-5	---	---	---	20-50	---	---
Range site number		028BY020NV	None	028BY069NV	028BY004NV	028BY074NV	028BY028NV	028BY050NV
Potential production (lb/acre):								
Favorable years		500		800	2200	600	800	1200
Normal years		300		600	1500	400	600	1000
Unfavorable years		150		400	800	200	400	800

1380--HULDERMAN-TOBA-BENIN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or inclusion number--					
		HULDERMAN	TOBA	BENIN	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORRY	---	---	---	---	2-10	---
alkali sacaton	SPA1	20-30	20-30	5-10	15-40	---	5-15
basin wildrye	ELCI2	2-5	2-5	2-5	40-60	10-20	2-8
bluegrass	POA++	---	---	---	---	---	25-50
inland saltgrass	DISPS2	---	---	2-8	2-5	---	---
mat muhly	MURI	30-40	30-40	---	---	---	30-40
rush	JuncU	5-10	5-10	---	---	---	---
western wheatgrass	AGSM	---	---	---	2-5	---	2-8
aster	ASTER	2-5	2-5	---	---	---	---
Douglas rabbitbrush	CHVI8	1-5	1-5	---	---	---	---
basin big sagebrush	ARTRT	2-5	2-5	---	---	---	---
big sagebrush	ARTR2	---	---	---	---	20-30	---
black greasewood	SAVE4	1-5	1-5	60-75	5-15	30-40	---
rubber rabbitbrush	CHNA2	5-10	5-10	2-5	2-5	2-5	---
shadscale	ATCO	---	---	2-5	---	---	---
Range site number		028BY031NV	028BY031NV	028BY020NV	028BY004NV	028BY028NV	028BY100NV
Potential production (lb/acre):							
Favorable years		1200	1200	500	2200	800	1500
Normal years		1000	1000	300	1500	600	1100
Unfavorable years		400	400	150	800	400	700

1390--WENDANE-MYSOL-TOBA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		WENDANE	MYSOL	TOBA	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	1-5	---	---	2-10	---
alkali sacaton	SPAI	15-40	---	20-30	15-40	---	5-15
basin wildrye	ELCI2	40-60	---	2-5	40-60	10-20	2-8
bluegrass	POA++	---	---	---	---	---	25-50
bottlebrush squirreltail	SIHY	---	5-10	---	---	---	---
inland saltgrass	DISPS2	2-5	---	---	2-5	---	---
mat muhly	MURI	---	---	30-40	---	---	30-40
rush	JunCU	---	---	5-10	---	---	---
western wheatgrass	AGSM	2-5	---	---	2-5	---	2-8
aster	ASTER	---	---	2-5	---	---	---
Douglas rabbitbrush	CHVI8	---	---	1-5	---	---	---
basin big sagebrush	ARTRT	---	---	2-5	---	---	---
big sagebrush	ARTR2	---	---	---	---	20-30	---
black greasewood	SAVE4	5-15	---	1-5	5-15	30-40	---
rubber rabbitbrush	CHNA2	2-5	---	5-10	2-5	2-5	---
shadscale	ATCO	---	85-90	---	---	---	---
Range site number		028BY004NV	028BY073NV	028BY031NV	028BY004NV	028BY028NV	028BY100NV
Potential production (lb/acre):							
Favorable years		2200	400	1200	2200	800	1500
Normal years		1500	300	1000	1500	600	1100
Unfavorable years		800	200	400	800	400	700

1410--THREESEE-TOSSER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		THREESEE	TOSSER	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-30	10-20	15-25	20-30	40-50	2-10
Sandberg bluegrass	POSE	2-5	2-5	---	2-5	---	---
basin wildrye	ELCI2	---	---	---	---	---	10-20
bottlebrush squirreltail	SIHY	2-8	2-5	2-5	2-8	2-5	---
needleandthread	STCO4	10-20	10-20	5-10	10-20	---	---
scarlet globemallow	SPCO	---	---	2-5	---	---	---
Wyoming big sagebrush	ARTRW	25-35	---	20-35	25-35	---	---
big sagebrush	ARTR2	---	---	---	---	---	20-30
black greasewood	SAVE4	---	---	---	---	---	30-40
black sagebrush	ARARN	---	35-45	---	---	---	---
bud sagebrush	ARSP5	---	---	---	---	5-15	---
rabbitbrush	CHRS9	2-5	---	---	2-5	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	---	2-5
shadscale	ATCO	---	2-5	2-5	---	---	---
spiny hopsage	GRSP	---	---	5-20	---	---	---
winterfat	EULA5	---	---	---	---	20-30	---
Range site number		028BY010NV	028BY016NV	028BY052NV	028BY010NV	028BY084NV	028BY028NV
Potential production (lb/acre):							
Favorable years		800	350	800	800	900	800
Normal years		600	225	600	600	700	600
Unfavorable years		400	100	450	400	400	400

1411--THREESSEE-LINOYER-OKAN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		THREESSEE	LINOYER	OKAN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-30	40-50	20-30	---	15-25	15-25	10-20
Sandberg bluegrass	POSE	2-5	---	2-5	5-10	---	---	2-5
bottlebrush squiireltail	SIHY	2-8	2-5	2-8	5-15	5-10	2-5	2-5
needleandthread	STCO4	10-20	---	10-20	---	---	5-10	10-20
other perennial grasses	PPGG	---	---	---	---	2-5	---	---
globemallow	SPHAE	---	---	---	---	2-5	---	---
scarlet globemallow	SPCO	---	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	25-35	---	25-35	50-70	---	20-35	---
black sagebrush	ARARN	---	---	---	---	---	---	35-45
bud sagebrush	ARSP5	---	5-15	---	---	2-8	---	---
fourwing saltbush	ATCA2	---	---	---	---	2-5	---	---
rabbitbrush	CHRY89	2-5	---	2-5	---	---	---	---
shadscale	ATCO	---	---	---	---	---	2-5	2-5
spiny hopsage	GRSP	---	---	---	---	---	5-20	---
winterfat	ECLAS	---	20-30	---	---	40-50	---	---
Range site number		028BY010NV	028BY084NV	028BY010NV	028BY056NV	028BY013NV	028BY052NV	028BY016NV
Potential production (lb/acre):								
Favorable years		800	900	800	450	700	800	350
Normal years		600	700	600	325	500	600	225
Unfavorable years		400	400	400	150	350	450	100

1412--THREESSEE-IDWAY ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		THREESSEE	IDWAY	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	20-30	2-10	15-25	2-5	5-10
Sandberg bluegrass	POSE	2-5	---	---	---	---
basin wildrye	ELCI2	---	10-20	---	---	2-5
bottlebrush squirreltail	SINY	2-8	---	2-5	2-5	---
needleandthread	STCO4	10-20	---	5-10	---	---
thickspike wheatgrass	AGDA	---	---	---	---	2-5
scarlet globemallow	SPCO	---	---	2-5	---	---
Wyoming big sagebrush	ARTRW	25-35	---	20-35	---	---
big sagebrush	ARTR2	---	20-30	---	---	---
black greasewood	SAVE4	---	30-40	---	20-30	40-60
bud sagebrush	ARSF5	---	---	---	2-10	---
fourwing saltbush	ATCA2	---	---	---	---	5-10
rabbitbrush	CHRY99	2-5	---	---	---	---
rubber rabbitbrush	CHNA2	---	2-5	---	---	---
shadscale	ATCO	---	---	2-5	20-50	5-10
spiny hopsage	GRSP	---	---	5-20	---	---
Range site number		028BY010NV	028BY028NV	028BY052NV	028BY074NV	028BY021NV
Potential production (lb/acre):						
Favorable years		800	800	800	600	400
Normal years		600	600	600	400	300
Unfavorable years		400	400	450	200	200

1413--IDWAY-ZORRAVISTA-KUNZLER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		IDWAY	ZORRAVISTA	KUNZLER	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	2-10	10-25	2-10	2-5	2-10
basin wildrye	ELCI2	10-20	---	10-20	---	10-20
bottlebrush squirreltail	SIHY	---	---	---	2-5	---
needleandthread	STCO4	---	2-5	---	---	---
other perennial grasses	PFGG	---	2-8	---	---	---
thickspike wheatgrass	AGDA	---	5-15	---	---	---
big sagebrush	ARTR2	20-30	30-40	20-30	---	20-30
black greasewood	SAVE4	30-40	---	30-40	20-30	30-40
bud sagebrush	ARSP5	---	---	---	2-10	---
fourwing saltbush	ATCA2	---	5-15	---	---	---
rubber rabbitbrush	CHNA2	2-5	2-5	2-5	---	2-5
shadscale	ATCO	---	---	---	20-50	---
spiny hopsage	GRSP	---	5-10	---	---	---
Range site number		028BY028NV	028BY068NV	028BY028NV	028BY074NV	028BY028NV
Potential production (lb/acre):						
Favorable years		800	800	800	600	800
Normal years		600	500	600	400	600
Unfavorable years		400	300	400	200	400

1414--THREESSEE-SHANTOWN-KUNZLER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or inclusion number--					
		THREESSEE	SHANTOWN	KUNZLER	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORRY	20-30	20-30	2-10	2-10	---	---
Sandberg bluegrass	POSE	2-5	2-5	---	---	---	---
alkali sacaton	SPAI	---	---	---	---	15-40	5-15
basin wildrye	ELCY2	---	---	10-20	10-20	40-60	2-8
bluegrass	POA++	---	---	---	---	---	25-50
bottlebrush squirreltail	SIHY	2-8	2-8	---	---	---	---
inland saltgrass	DISPS2	---	---	---	---	2-5	---
mat muhly	MURI	---	---	---	---	---	30-40
needleandthread	STCO4	10-20	10-20	---	---	---	---
western wheatgrass	AGSM	---	---	---	---	2-5	2-8
Wyoming big sagebrush	ARTRW	25-35	25-35	---	---	---	---
big sagebrush	ARTR2	---	---	20-30	20-30	---	---
black greasewood	SAVE4	---	---	30-40	30-40	5-15	---
rabbitbrush	CHRY89	2-5	2-5	---	---	---	---
rubber rabbitbrush	CHNA2	---	---	2-5	2-5	2-5	---
Range site number		028BY010NV	028BY010NV	028BY028NV	028BY028NV	028BY004NV	028BY100NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	2200	1500
Normal years		600	600	600	600	1500	1100
Unfavorable years		400	400	400	400	800	700

1430--POOKALOO-TECOMar-ROCK OUTCROP ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		POOKALOO	TECOMar	ROCK OUTCROP	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORBY	X	10-20	---	---	---	15-30
Thurber needlegrass	STTH2	X	---	---	---	---	30-40
basin wildrye	ELCI2	X	---	---	---	---	---
muttongrass	POFE	---	---	---	---	5-10	---
Scribner needlegrass	STSC2	---	---	---	2-10	---	---
bluebunch wheatgrass	AGSP	X	20-40	---	---	30-45	30-40
bluegrass	POA++	X	2-5	---	---	---	5-10
bottlebrush squirreltail	SIHY	X	---	---	---	---	---
needleandthread	STCO4	---	2-5	---	---	---	2-8
arrowleaf balsamroot	BASA3	X	---	---	---	---	2-5
goldenweed	HAPLO2	---	2-5	---	2-5	---	---
tapertip hawksbeard	CRAC2	X	2-5	---	---	---	2-5
Stansbury cliffrose	COMES	X	---	---	---	---	---
antelope bitterbrush	PUTR2	X	---	---	---	---	2-5
black sagebrush	ARARN	X	25-35	---	2-8	35-45	2-10
littleleaf mountainmahogany	CSIN7	---	---	---	60-70	---	---
desert snowberry	SYLO	---	---	---	2-8	---	---
Douglas rabbitbrush	CHVI8	---	---	---	---	2-5	---
mountain big sagebrush	ARVA2	---	---	---	---	---	15-25
big sagebrush	ARTR2	---	---	---	---	---	15-25
curlleaf mountainmahogany	CELE3	X	---	---	---	---	---
serviceberry	AMELA	X	---	---	---	---	---
shadscale	ATCO	---	2-5	---	---	---	---
winterfat	EULA5	---	2-5	---	---	---	---
Utah juniper	JUOS	X	---	---	---	---	---
singleleaf pinyon	PIMO	X	---	---	---	---	---
Range site number		028BY060NV	028BY008NV	None	028BY066NV	028BY048NV	028BY079NV
Potential production (lb/acre):							
Favorable years		500	600		1300	350	700
Normal years		300	400		1000	200	500
Unfavorable years		250	200		800	100	300

1440--BOOFUSS-EQUIS ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		BOOFUSS	BOOFUSS	EQUIS	Inclusion 1	Inclusion 2
Baltic rush	JUBA	---	---	2-8	---	---
Indian ricegrass	ORHY	---	---	---	2-5	---
alkali cordgrass	SPGR	---	---	10-15	---	---
alkali sacaton	SPAI	---	5-10	40-50	---	15-40
alkaligrass	FUCCI	---	---	2-5	---	---
basin wildrye	ELCI2	10-20	2-5	---	---	40-60
bluegrass	POA++	---	---	2-8	---	---
bottlebrush squirreltail	SIHY	2-5	---	---	2-5	---
inland saltgrass	DISPS2	2-10	2-8	2-5	---	2-5
sedge	CAREX	---	---	5-10	---	---
western wheatgrass	AGSM	---	---	---	---	2-5
black greasewood	SAVE4	50-60	60-75	---	20-30	5-15
bud sagebrush	ARSP5	---	---	---	2-10	---
rubber rabbitbrush	CHNA2	---	2-5	---	---	2-5
shadscale	ATCO	---	2-5	---	20-50	---
Range site number		028BY069NV	028BY020NV	028BY002NV	028BY074NV	028BY004NV
Potential production (lb/acre):						
Favorable years		800	500	1500	600	2200
Normal years		600	300	1000	400	1500
Unfavorable years		400	150	700	200	800

1441--BOOFUSS-WENDANE-UMBERLAND ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		BOOFUSS	WENDANE	UMBERLAND	Inclusion 1	Inclusion 2	Inclusion 3
Baltic rush	JURA	2-8	---	---	---	---	---
alkali cordgrass	SPGR	10-15	---	---	---	---	---
alkali sacaton	SPAI	40-50	15-40	5-10	---	5-10	---
alkaligrass	PUCCI	2-5	---	---	---	---	---
basin wildrye	ELCI2	---	40-60	2-5	---	2-5	---
bluegrass	POA++	2-8	---	---	---	---	---
inland saltgrass	DISPS2	2-5	2-5	2-8	---	2-8	20-30
sedge	CAREX	5-10	---	---	---	---	---
western wheatgrass	AGSM	---	2-5	---	---	---	---
black greasewood	SAVE4	---	5-15	60-75	---	60-75	---
iodinebush	ALOC2	---	---	---	---	---	50-60
rubber rabbitbrush	CHNA2	---	2-5	2-5	---	2-5	---
shadscale	ATCO	---	---	2-5	---	2-5	---
Range site number		028BY002NV	028BY004NV	028BY020NV	None	028BY020NV	028AY009NV
Potential production (lb/acre):							
Favorable years		1500	2200	500		500	150
Normal years		1000	1500	300		300	100
Unfavorable years		700	800	150		150	75

1450--PILTDOWN-KAWICH ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		PILTDOWN	KAWICH	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	50-70	5-10	---	20-35	2-10	---
Sandberg bluegrass	POSE	---	---	5-10	2-8	---	---
basin wildrye	ELCI2	---	2-5	---	---	10-20	---
bottlebrush squirreltail	SINY	---	---	5-15	2-5	---	---
galleta	HIJA	2-5	---	---	---	---	---
needleandthread	STCO4	2-5	---	---	5-15	---	---
sand dropseed	SPCR	5-15	---	---	---	---	---
thickspike wheatgrass	AGDA	---	2-5	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	60-70	---	---	---
big sagebrush	ARTR2	---	---	---	---	20-30	---
black greasewood	SAVE4	---	40-60	---	---	30-40	---
black sagebrush	ARARN	---	---	---	25-35	---	---
downy rabbitbrush	CHVIP4	---	---	---	2-5	---	---
fourwing saltbush	ATCA2	15-25	5-10	---	---	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	2-5	---
shadscale	ATCO	---	5-10	---	2-5	---	---
winterfat	EULA5	2-8	---	---	---	---	---
Range site number		029XY012NV	028BY021NV	028BY056NV	028BY011NV	028BY028NV	None
Potential production (lb/acre):							
Favorable years		700	400	450	600	800	
Normal years		500	300	325	450	600	
Unfavorable years		300	200	150	250	400	

1460--TOSSEER-THREESEE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		TOSSEER	THREESEE	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	10-20	20-30	1-5	---	20-30
Sandberg bluegrass	POSE	2-5	2-5	---	5-10	2-5
bottlebrush squirreltail	SIHY	2-5	2-8	5-10	5-15	2-8
needleandthread	STCO4	10-20	10-20	---	---	10-20
Wyoming big sagebrush	ARTRW	---	25-35	---	60-70	25-35
black sagebrush	ARARN	35-45	---	---	---	---
rabbitbrush	CHRY89	---	2-5	---	---	2-5
shadscale	ATCO	2-5	---	85-90	---	---
Range site number		028BY016NV	028BY010NV	028BY073NV	028BY056NV	028BY010NV
Potential production (lb/acre):						
Favorable years		350	800	400	450	800
Normal years		225	600	300	325	600
Unfavorable years		100	400	200	150	400

1471--TIMPIE-KUNZLER-THREESEE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		TIMPIE	KUNZLER	THREESEE	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	40-50	---	20-30	40-50	15-25
Sandberg bluegrass	POSE	---	5-10	2-5	---	---
basin wildrye	ELCI2	---	---	---	---	5-10
bottlebrush squirreltail	SIEY	2-5	5-15	2-8	2-5	2-8
needleandthread	STCO4	---	---	10-20	---	---
wheatgrass	AGROP2	---	---	---	---	5-15
Wyoming big sagebrush	ARTRW	---	60-70	25-35	---	30-45
bud sagebrush	ARSP5	5-15	---	---	5-15	---
rabbitbrush	CHRY99	---	---	2-5	---	---
winterfat	EULA5	20-30	---	---	20-30	2-8
Range site number		028BY084NV	028BY056NV	028BY010NV	028BY084NV	028BY014NV
Potential production (lb/acre):						
Favorable years		900	450	800	900	600
Normal years		700	325	600	700	450
Unfavorable years		400	150	400	400	200

1480--TULASE-LINOYER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		TULASE	LINOYER	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	5-10	15-25	20-30	10-20	20-35	15-25
Sandberg bluegrass	POSE	---	---	2-5	---	2-8	---
basin wildrye	ELCI2	10-20	---	---	---	---	---
bottlebrush squirreltail	SIHY	---	5-10	2-5	2-5	2-5	2-5
needleandthread	STCO4	---	---	10-20	---	5-15	5-10
other perennial grasses	PPGG	---	2-5	---	---	---	---
thickspike wheatgrass	AGDA	5-10	---	---	---	---	---
western wheatgrass	AGSM	---	---	---	5-15	---	---
globemallow	SPRAE	---	2-5	---	---	---	---
scarlet globemallow	SPCO	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	25-35	---	25-35	---	---	20-35
black sagebrush	ARARN	---	---	---	---	25-35	---
bud sagebrush	ARSP5	---	2-8	---	---	---	---
downy rabbitbrush	CHVIP4	---	---	---	---	2-5	---
fourwing saltbush	ATCA2	---	2-5	---	---	---	---
shadscale	ATCO	---	---	---	---	2-5	2-5
sickle saltbush	ATFA	---	---	---	45-55	---	---
spiny hopsage	GRSP	---	---	---	---	---	5-20
winterfat	EULA5	---	40-50	---	2-5	---	---
Range site number		028BY045NV	028BY013NV	028BY080NV	028BY065NV	028BY011NV	028BY052NV
Potential production (lb/acre):							
Favorable years		1000	700	600	700	600	800
Normal years		800	500	400	500	450	600
Unfavorable years		600	350	200	350	250	450

1500--TOOELE-LORAY ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		TOOELE	LORAY	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	2-5	15-25	2-5	5-10	---	5-10
King desertgrass	BLKI	---	2-5	---	---	---	---
basin wildrye	ELCI2	---	---	---	2-5	---	---
bottlebrush squirreltail	SIHY	2-5	---	2-5	---	---	2-5
galleta	HIJA	---	2-8	---	---	---	1-4
inland saltgrass	DISPS2	---	---	---	---	20-30	---
thickspike wheatgrass	AGDA	---	---	---	2-5	---	---
globemallow	SPRAE	---	2-5	---	---	---	2-5
Nevada ephedra	EPNE	---	---	---	---	---	2-15
black greasewood	SAVE4	20-30	---	20-30	40-60	---	---
bud sagebrush	ARSP5	2-10	5-10	2-10	---	---	---
fourwing saltbush	ATCA2	---	---	---	5-10	---	5-30
gray molly kochia	KOAMV	---	2-5	---	---	---	---
iodinebush	ALOC2	---	---	---	---	50-60	---
rabbitbrush	CHRY99	---	---	---	---	---	5-20
shadscale	ATCO	20-50	40-50	20-50	5-10	---	2-5
spiny hopsage	GRSP	---	---	---	---	---	5-20
winterfat	EULA5	---	2-8	---	---	---	---
Range site number		028BY074NV	028AY012NV	028BY074NV	028BY021NV	028AY009NV	028AY037NV
Potential production (lb/acre):							
Favorable years		600	500	600	400	150	600
Normal years		400	300	400	300	100	500
Unfavorable years		200	200	200	200	75	400

1510--IZAMATCH-CLIFFDOWN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		IZAMATCH	CLIFFDOWN	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	35-45	15-25	25-35	2-5	5-10
King desertgrass	BLKI	---	2-5	---	---	---
bottlebrush squirreltail	SIHY	---	---	2-5	2-5	2-5
galleta	HIJA	2-8	2-8	2-5	---	1-4
needleandthread	STCO4	2-8	---	---	---	---
sand dropseed	SPCR	2-5	---	2-5	---	---
globemallow	SPRAE	2-5	2-5	2-5	---	2-5
princesplume	STANL	---	---	2-5	---	---
Nevada ephedra	EPNE	---	---	2-5	---	2-15
black greasewood	SAVE4	---	---	---	20-30	---
bud sagebrush	ARSP5	2-10	5-10	2-5	2-10	---
fourwing saltbush	ATCA2	---	---	---	---	5-30
gray molly kochia	KOAMV	---	2-5	---	---	---
horsebrush	TETRA3	---	---	5-10	---	---
rabbitbrush	CHRY99	---	---	---	---	5-20
shadscale	ATCO	20-30	40-50	15-25	20-50	2-5
spiny hopsage	GRSP	---	---	---	---	5-20
winterfat	EULAS	5-15	2-8	5-10	---	---
Range site number		028AY018NV	028AY012NV	028AY014NV	028BY074NV	028AY037NV
Potential production (lb/acre):						
Favorable years		700	500	600	600	600
Normal years		500	300	400	400	500
Unfavorable years		300	200	200	200	400

1520--IZAMATCH-LUNING ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		IZAMATCH	IZAMATCH	LUNING	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	35-45	25-35	25-35	10-25	5-10	10-20	10-25
Sandberg bluegrass	POSE	---	---	---	2-5	---	---	---
bottlebrush squirreltail	SINY	---	2-5	2-5	---	2-5	2-5	2-5
galleta	HIJA	2-8	2-5	2-5	2-8	1-4	1-5	2-8
needleandthread	STCO4	2-8	---	---	2-10	---	---	2-10
sand dropseed	SPCR	2-5	2-5	2-5	---	---	---	---
globemallow	SPHAE	2-5	2-5	2-5	---	2-5	2-5	---
princesplume	STANL	---	2-5	2-5	---	---	---	---
Nevada ephedra	EPNE	---	2-5	2-5	---	2-15	---	---
black sagebrush	ARARN	---	---	---	15-30	---	---	---
bud sagebrush	ARSFS	2-10	2-5	2-5	---	---	---	2-10
fourwing saltbush	ATCA2	---	---	---	---	5-30	10-20	---
horsebrush	TETRA3	---	5-10	5-10	---	---	---	---
rabbitbrush	CHRY99	---	---	---	---	5-20	---	---
shadscale	ATCO	20-30	15-25	15-25	2-5	2-5	2-5	15-25
spiny hopsage	GRSP	---	---	---	---	5-20	30-40	---
winterfat	EULAS	5-15	5-10	5-10	5-10	---	2-5	2-5
Range site number		028AY018NV	028AY014NV	028AY014NV	028AY004NV	028AY037NV	028AY006NV	028AY003NV
Potential production (lb/acre):								
Favorable years		700	600	600	500	600	600	250
Normal years		500	400	400	325	500	400	150
Unfavorable years		300	200	200	100	400	250	75

1521--IZAMATCH-THERIOT ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		IZAMATCH	IZAMATCH	THERIOT	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	35-45	25-35	15-25	10-25	5-10	40-50	10-25
Sandberg bluegrass	POSE	---	---	---	2-5	---	---	2-5
bottlebrush squirreltail	SIHY	---	2-5	---	---	2-5	---	---
galleta	HIJA	2-8	2-5	2-8	2-8	1-4	2-8	2-8
needleandthread	STCO4	2-8	---	5-15	2-10	---	---	2-10
sand dropseed	SPCR	2-5	2-5	---	---	---	---	---
globemallow	SPHAE	2-5	2-5	---	---	2-5	2-5	---
princesplume	STANL	---	2-5	---	---	---	---	---
Nevada ephedra	EPNE	---	2-5	5-15	---	2-15	---	---
black sagebrush	ARARN	---	---	15-35	15-30	---	---	15-30
bud sagebrush	ARSP5	2-10	2-5	---	---	---	2-8	---
fourwing saltbush	ATCA2	---	---	---	---	5-30	---	---
horsebrush	TETRA3	---	5-10	5-15	---	---	---	---
rabbitbrush	CHRS9	---	---	---	---	5-20	---	---
shadscale	ATCO	20-30	15-25	2-8	2-5	2-5	1-5	2-5
spiny hopsage	GRSP	---	---	---	---	5-20	---	---
winterfat	EULA5	5-15	5-10	2-8	5-10	---	25-30	5-10
Range site number		028AY018NV	028AY014NV	028AY044NV	028AY004NV	028AY037NV	028AY002NV	028AY004NV
Potential production (lb/acre):								
Favorable years		700	600	600	500	600	800	500
Normal years		500	400	400	325	500	600	325
Unfavorable years		300	200	200	100	400	400	100

1522--IZAMATCH-SMAUG-BADLAND ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		IZAMATCH	SMAUG	BADLAND	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	35-45	40-50	---	5-10	40-50	25-35
bottlebrush squirreltail	SIHY	---	---	---	2-5	---	2-5
galleta	HIJA	2-8	2-8	---	1-4	2-8	2-5
needleandthread	STCO4	2-8	---	---	---	---	---
sand dropseed	SPCR	2-5	---	---	---	---	2-5
globemallow	SPHAE	2-5	2-5	---	2-5	2-5	2-5
princesplume	STANL	---	---	---	---	---	2-5
Nevada ephedra	EPNE	---	---	---	2-15	---	2-5
bud sagebrush	ARSP5	2-10	2-8	---	---	2-8	2-5
fourwing saltbush	ATCA2	---	---	---	5-30	---	---
horsebrush	TETRA3	---	---	---	---	---	5-10
rabbitbrush	CHRY89	---	---	---	5-20	---	---
shadscale	ATCO	20-30	1-5	---	2-5	1-5	15-25
spiny hopsage	GRSP	---	---	---	5-20	---	---
winterfat	EULA5	5-15	25-30	---	---	25-30	5-10
Range site number		028AY016NV	028AY002NV	None	028AY037NV	028AY002NV	028AY014NV
Potential production (lb/acre):							
Favorable years		700	800		600	800	600
Normal years		500	600		500	600	400
Unfavorable years		300	400		400	400	200

1530--THERIOT-IZAMATCH ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		THERIOT	THERIOT	IZAMATCH	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	15-25	10-25	35-45	---	10-25	40-50	5-10
Sandberg bluegrass	POSE	---	---	---	---	2-5	---	---
bottlebrush squirreltail	SIMY	---	2-5	---	---	---	---	2-5
galleta	RIJA	2-8	2-8	2-8	---	2-8	2-8	1-4
needleandthread	STCO4	5-15	2-10	2-8	---	2-10	---	---
sand dropseed	SPCR	---	---	2-5	---	---	---	---
globemallow	SPHAE	---	---	2-5	---	---	2-5	2-5
Nevada ephedra	EPNE	5-15	---	---	---	---	---	2-15
black sagebrush	ARARN	15-35	---	---	---	15-30	---	---
bud sagebrush	ARSP5	---	2-10	2-10	---	---	2-8	---
fourwing saltbush	ATCA2	---	---	---	---	---	---	5-30
horsebrush	TETRA3	5-15	---	---	---	---	---	---
rabbitbrush	CHRY89	---	---	---	---	---	---	5-20
shadscale	ATCO	2-8	15-25	20-30	---	2-5	1-5	2-5
spiny hopsage	GRSP	---	---	---	---	---	---	5-20
winterfat	EULA5	2-8	2-5	5-15	---	5-10	25-30	---
Range site number		028AY044NV	028AY003NV	028AY018NV	None	028AY004NV	028AY002NV	028AY037NV
Potential production (lb/acre):								
Favorable years		600	250	700		500	800	600
Normal years		400	150	500		325	600	500
Unfavorable years		200	75	300		100	400	400

1531--THERIOT-IZAMATCH-ROCK OUTCROP ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		THERIOT	IZAMATCH	ROCK OUTCROP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	15-25	10-25	---	15-25	10-25	5-10	---
bottlebrush squirreltail	SIHY	---	2-5	---	---	2-5	2-8	---
galleta	HIJA	2-8	2-8	---	2-8	2-8	---	---
needleandthread	STCO4	5-15	2-10	---	5-15	2-10	---	---
Nevada ophedra	EPNE	5-15	---	---	5-15	---	---	---
black sagebrush	ARARN	15-35	---	---	15-35	---	---	---
bud sagebrush	ARSP5	---	2-10	---	---	2-10	---	---
horsebrush	TETRA3	5-15	---	---	5-15	---	---	---
shadscale	ATCO	2-8	15-25	---	2-8	15-25	---	---
winterfat	EULA5	2-8	2-5	---	2-8	2-5	60-70	---
Range site number		028AY044NV	028AY003NV	None	028AY044NV	028AY003NV	028BY018NV	None
Potential production (lb/acre):								
Favorable years		600	250		600	250	500	
Normal years		400	150		400	150	350	
Unfavorable years		200	75		200	75	200	

1532--THERIOT-ROCK OUTCROP ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		THERIOT	THERIOT	ROCK OUTCROP	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	15-25	15-25	---	10-25	35-45	5-10
Sandberg bluegrass	POSE	---	---	---	2-5	---	---
bottlebrush squirreltail	SIHY	---	---	---	---	---	2-5
galleta	HIJA	2-8	2-8	---	2-8	2-8	1-4
needleandthread	STCO4	5-15	5-15	---	2-10	2-8	---
sand dropseed	SPCR	---	---	---	---	2-5	---
globemallow	SPHAE	---	---	---	---	2-5	2-5
Nevada ophedra	EPNE	5-15	5-15	---	---	---	2-15
black sagebrush	ARARN	15-35	15-35	---	15-30	---	---
bud sagebrush	ARSP5	---	---	---	---	2-10	---
fourwing saltbush	ATCA2	---	---	---	---	---	5-30
horsebrush	TETRA3	5-15	5-15	---	---	---	---
rabbitbrush	CHRY89	---	---	---	---	---	5-20
shadscale	ATCO	2-8	2-8	---	2-5	20-30	2-5
spiny hopsage	GRSP	---	---	---	---	---	5-20
winterfat	EULA5	2-8	2-8	---	5-10	5-15	---
Range site number		028AY044NV	028AY044NV	None	028AY004NV	028AY018NV	028AY037NV
Potential production (lb/acre):							
Favorable years		600	600		500	700	600
Normal years		400	400		325	500	500
Unfavorable years		200	200		100	300	400

1540--AMTOFT-KYLER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		KYLER	AMTOFT	AMTOFT	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	10-25	15-25	5-15	---	---	15-25	2-10
Sandberg bluegrass	POSE	2-5	2-5	---	---	---	---	2-8
Scribner needlegrass	STSC2	---	---	---	5-10	---	---	---
blue grama	BOGR2	---	---	1-5	---	---	---	---
bluebunch wheatgrass	AGSP	---	2-8	30-40	---	---	---	---
bluegrass	POA++	---	---	2-5	---	---	---	---
bottlebrush squirreltail	SIHY	---	2-5	---	---	---	2-5	---
galleta	HIJA	2-8	2-8	---	2-4	---	2-5	1-5
needleandthread	STCO4	2-10	---	2-5	---	---	5-10	1-5
scarlet globemallow	SPCO	---	---	---	---	---	2-5	---
Nevada ephedra	EPNE	---	---	---	---	---	---	5-10
Nevada greaseweed	FONE2	---	---	---	2-5	---	---	---
Stansbury cliffrose	COMES	---	---	2-8	2-5	---	---	---
Utah juniper	JUOS	---	5-15	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	25-35	---
big sagebrush	ARTR2	---	---	---	---	---	---	30-45
black sagebrush	ARARN	15-30	40-50	25-35	2-8	---	---	---
bud sagebrush	ARSP5	---	---	---	---	---	2-5	---
horsebrush	TETRA3	---	---	---	---	---	---	2-8
littleleaf mountainmahogany	CEIN7	---	---	---	60-70	---	---	---
other shrubs	SSSS	---	---	---	---	---	---	5-25
rubber rabbitbrush	CHNA2	---	---	---	---	---	---	5-20
shadscale	ATCO	2-5	---	---	---	---	2-5	---
spiny hopsage	GRSP	---	---	---	---	---	5-15	2-8
winterfat	EULA5	5-10	---	---	---	---	---	---
Range site number		028AY004NV	028AY027NV	028AY034NV	028AY029NV	None	028AY028NV	028AY038NV
Potential production (lb/acre):								
Favorable years		500	400	600	900		900	1000
Normal years		325	350	400	700		700	700
Unfavorable years		100	125	200	500		400	500

1541--KYLER-ROCK OUTCROP ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or inclusion number--						
		KYLER	KYLER	ROCK OUTCROP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	10-25	10-25	---	10-25	15-25	15-25	5-10
Sandberg bluegrass	POSE	2-5	2-5	---	2-5	---	2-5	---
bottlebrush squirreltail	SIHY	---	---	---	---	2-5	---	2-5
galleta	HIJA	2-8	2-8	---	2-8	2-5	1-5	1-4
needleandthread	STCO4	2-10	2-10	---	2-10	5-10	5-10	---
globemallow	SPHAE	---	---	---	---	---	2-5	2-5
scarlet globemallow	SPCO	---	---	---	---	2-5	---	---
Nevada ephedra	EPNE	---	---	---	---	---	---	2-15
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	---	---
black sagebrush	ARARN	15-30	15-30	---	15-30	---	15-25	---
bud sagebrush	ARSP5	---	---	---	---	2-5	---	---
fourwing saltbush	ATCA2	---	---	---	---	---	---	5-30
rabbitbrush	CHRY99	---	---	---	---	---	---	5-20
shadscale	ATCO	2-5	2-5	---	2-5	2-5	---	2-5
spiny hopsage	GRSP	---	---	---	---	5-15	20-30	5-20
winterfat	EULA5	5-10	5-10	---	5-10	---	---	---
Range site number		028AY004NV	028AY004NV	None	028AY004NV	028AY028NV	028AY047NV	028AY037NV
Potential production (lb/acre):								
Favorable years		500	500		500	900	600	600
Normal years		325	325		325	700	400	500
Unfavorable years		100	100		100	400	200	400

1542--KYLER-AMTOFT-JERICO ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or inclusion number--						
		KYLER	AMTOFT	JERICO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	10-25	15-25	20-30	10-25	---	15-25	5-15
Sandberg bluegrass	POSE	2-5	2-5	---	2-5	---	---	---
blue grama	BGR2	---	---	---	---	---	---	1-5
bluebunch wheatgrass	AGSP	---	2-8	---	---	---	---	30-40
bottlebrush squirreltail	SIBY	---	2-5	---	---	---	2-5	---
galleta	HIJA	2-8	2-8	2-5	2-8	---	2-5	---
muttongrass	POPE	---	---	---	---	---	---	2-8
needleandthread	STCO4	2-10	---	15-25	2-10	---	5-10	2-5
sand dropseed	SPCR	---	---	2-5	---	---	---	---
globemallow	SPHA	---	---	2-5	---	---	---	---
scarlet globemallow	SFCO	---	---	---	---	---	2-5	---
Stansbury cliffrose	COMES	---	---	---	---	---	---	2-8
Utah juniper	JUOS	---	5-15	---	---	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	25-35	---
black sagebrush	ARARN	15-30	40-50	15-30	15-30	---	---	25-35
bud sagebrush	ARSP5	---	---	---	---	---	2-5	---
fourwing saltbush	ATCA2	---	---	2-8	---	---	---	---
shadscale	ATCO	2-5	---	---	2-5	---	2-5	---
spiny hopsage	GRSP	---	---	---	---	---	5-15	---
winterfat	EULA5	5-10	---	2-5	5-10	---	---	---
Range site number		028AY004NV	028AY027NV	028AY013NV	028AY004NV	None	028AY028NV	028AY043NV
Potential production (lb/acre):								
Favorable years		500	400	700	500		900	800
Normal years		325	350	500	325		700	600
Unfavorable years		100	125	300	100		400	400

1550--JERICHO ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		JERICHO	JERICHO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORBY	20-30	10-25	5-15	20-30	15-25	15-25
Sandberg bluegrass	POSE	---	2-5	---	2-5	2-5	---
blue grama	BOGR2	---	---	1-5	---	---	---
bluebunch wheatgrass	AGSP	---	---	30-40	---	2-8	---
bluegrass	POA++	---	---	2-5	---	---	---
bottlebrush squirreltail	SIHY	---	---	---	2-5	2-5	2-5
galleta	HIJA	2-5	2-8	---	2-8	2-8	2-5
needleandthread	STCO4	15-25	2-10	2-5	15-25	---	5-10
sand dropseed	SPCR	2-5	---	---	---	---	---
globemallow	SPHAB	2-5	---	---	2-5	---	---
scarlet globemallow	SPCO	---	---	---	---	---	2-5
Stansbury cliffrose	COMES	---	---	2-8	---	---	---
Utah juniper	JUOS	---	---	---	---	5-15	---
Wyoming big sagebrush	ARTRW	---	---	---	15-25	---	25-35
black sagebrush	ARARN	15-30	15-30	25-35	---	40-50	---
bud sagebrush	ARSP5	---	---	---	---	---	2-5
fourwing saltbush	ATCA2	2-8	---	---	---	---	---
shadscale	ATCO	---	2-5	---	---	---	2-5
spiny hopsage	GRSP	---	---	---	2-5	---	5-15
winterfat	EULA5	2-5	5-10	---	2-5	---	---
Range site number		028AY013NV	028AY004NV	028AY034NV	028AY015NV	028AY027NV	028AY028NV
Potential production (lb/acre):							
Favorable years		700	500	600	800	400	900
Normal years		500	325	400	600	350	700
Unfavorable years		300	100	200	400	125	400

1560--TOANO-TIMPIE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		TOANO	TIMPIE	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	15-25	10-20	20-30	35-45	10-15
bottlebrush squirreltail	SIHY	5-10	2-5	---	---	2-5
galleta	HIJA	---	---	2-8	2-8	---
needleandthread	STCO4	---	---	5-15	2-8	---
sand dropseed	SPCR	---	---	2-5	2-5	---
western wheatgrass	AGSM	---	5-15	---	---	---
globemallow	SPHAE	2-5	---	---	2-5	---
Nevada ephedra	EPNE	---	---	1-5	---	---
black greasewood	SAVE4	---	---	---	---	15-25
bud sagebrush	ARSP5	---	---	---	2-10	---
fourwing saltbush	ATCA2	2-5	---	15-25	---	---
gray molly kochia	KOAMV	---	2-5	---	---	---
other shrubs	SSSS	5-15	---	---	---	---
shadscale	ATCO	---	---	---	20-30	---
sickle saltbush	ATPA	---	45-55	---	---	---
spiny hopsage	GRSP	---	---	2-8	---	40-60
winterfat	EULA5	50-60	2-8	10-20	5-15	---
Range site number		028AY030NV	028AY033NV	028AY019NV	028AY018NV	028AY032NV
Potential production (lb/acre):						
Favorable years		700	700	600	700	1000
Normal years		500	500	400	500	800
Unfavorable years		350	350	250	300	600

1570--JERICO-XERIC TORRIORTHENTS ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		JERICO	XERIC TORRIO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	10-25	---	10-25	10-25	15-25	2-10
Sandberg bluegrass	POSE	2-5	---	2-5	2-5	---	2-5
alkali sacaton	SPAI	---	2-5	---	---	---	---
basin wildrye	ELCI2	---	40-60	---	---	---	---
bluegrass	POA++	---	2-5	---	---	---	---
bottlebrush squirreltail	SIHY	---	---	---	---	2-5	2-5
galleta	HIJA	2-8	---	2-8	2-8	2-5	2-5
needleandthread	STCO4	2-10	---	2-10	2-10	5-10	2-10
western wheatgrass	AGSM	---	5-10	---	---	---	---
scarlet globemallow	SPCO	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	---
basin big sagebrush	ARTRT	---	5-15	---	---	---	---
black greasewood	SAVE4	---	2-5	---	---	---	---
black sagebrush	ARARN	15-30	---	15-30	15-30	---	---
bud sagebrush	ARSP5	---	---	---	---	2-5	---
pigmy sagebrush	ARPY2	---	---	---	---	---	50-70
rubber rabbitbrush	CHNA2	---	2-5	---	---	---	---
shadscale	ATCO	2-5	---	2-5	2-5	2-5	---
spiny hopsage	GRSP	---	---	---	---	5-15	---
winterfat	EULAS	5-10	---	5-10	5-10	---	---
Range site number		028AY004NV	028BY041NV	028AY004NV	028AY004NV	028AY028NV	028AY007NV
Potential production (lb/acre):							
Favorable years		500	1800	500	500	900	250
Normal years		325	1500	325	325	700	175
Unfavorable years		100	1100	100	100	400	100

1580--ARMESPAN-JERICO ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		ARMESPAN	JERICO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	10-25	10-25	35-45	15-25	2-10	20-30
Sandberg bluegrass	POSE	2-5	2-5	---	---	2-8	2-5
bottlebrush squirreltail	SIBY	---	---	---	2-5	---	2-5
galleta	HIJA	2-8	2-8	2-8	2-5	1-5	2-8
needleandthread	STCO4	2-10	2-10	2-8	5-10	1-5	15-25
sand dropseed	SPCR	---	---	2-5	---	---	---
globemallow	SPHAE	---	---	2-5	---	---	2-5
scarlet globemallow	SPCO	---	---	---	2-5	---	---
Nevada sphedra	EPNE	---	---	---	---	5-10	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	---	15-25
big sagebrush	ARTR2	---	---	---	---	30-45	---
black sagebrush	ARARN	15-30	15-30	---	---	---	---
bud sagebrush	ARSP5	---	---	2-10	2-5	---	---
horsebrush	TETRA3	---	---	---	---	2-8	---
other shrubs	SSSS	---	---	---	---	5-25	---
rubber rabbitbrush	CHNA2	---	---	---	---	5-20	---
shadscale	ATCO	2-5	2-5	20-30	2-5	---	---
spiny hopsage	GRSP	---	---	---	5-15	2-8	2-5
winterfat	BULA5	5-10	5-10	5-15	---	---	2-5
Range site number		028AY004NV	028AY004NV	028AY018NV	028AY028NV	028AY038NV	028AY015NV
Potential production (lb/acre):							
Favorable years		500	500	700	900	1000	800
Normal years		325	325	500	700	700	600
Unfavorable years		100	100	300	400	500	400

1581--ARMESPAN-KYLER-HEIST ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		ARMESPAN	KYLER	HEIST	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	10-25	10-25	40-50	15-25	15-25	2-10	15-25
Sandberg bluegrass	POSE	2-5	2-5	---	2-5	2-5	2-5	---
bluebunch wheatgrass	AGSP	---	---	---	2-8	---	---	---
bottlebrush squirreltail	SIHY	---	---	2-5	2-5	---	2-5	2-5
galleta	HIJA	2-8	2-8	---	2-8	1-5	2-5	2-5
needleandthread	STCO4	2-10	2-10	---	---	5-10	2-10	5-10
globemallow	SPHAE	---	---	---	---	2-5	---	---
scarlet globemallow	SFCO	---	---	---	---	---	---	2-5
Utah juniper	JUOS	---	---	---	5-15	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	---	---	25-35
black sagebrush	ARARN	15-30	15-30	---	40-50	15-25	---	---
bud sagebrush	ARSP5	---	---	5-15	---	---	---	2-5
pigmy sagebrush	ARPY2	---	---	---	---	---	50-70	---
shadscale	ATCO	2-5	2-5	---	---	---	---	2-5
spiny hopsage	GRSP	---	---	---	---	20-30	---	5-15
winterfat	EULA5	5-10	5-10	20-30	---	---	---	---
Range site number		028AY004NV	028AY004NV	028BY084NV	028AYD17NV	028AY047NV	028AY007NV	028AY028NV
Potential production (lb/acre):								
Favorable years		500	500	900	400	600	250	900
Normal years		325	325	700	350	400	175	700
Unfavorable years		100	100	400	125	200	100	400

1582--ARMESPAN-XERIC TORRIORTHENTS ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		ARMESPAN	XERIC TORRIO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	10-25	---	10-25	10-25	15-25	X
Sandberg bluegrass	POSE	2-5	---	2-5	2-5	---	X
alkali sacaton	SPAI	---	2-5	---	---	---	---
basin wildrye	ELCI2	---	40-60	---	---	---	---
bluegrass	FOA++	---	2-5	---	---	---	---
bottlebrush squirreltail	SIHY	---	---	---	---	2-5	X
galleta	HIJA	2-8	---	2-8	2-8	2-5	X
needleandthread	STCO4	2-10	---	2-10	2-10	5-10	X
western wheatgrass	AGSM	---	5-10	---	---	---	---
King birdbeak	COKI	---	---	---	---	---	X
erigonum	ERIOG	---	---	---	---	---	X
phlox	PHLOX	---	---	---	---	---	X
scarlet globemallow	SPCO	---	---	---	---	2-5	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	X
Utah juniper	JUOS	---	---	---	---	---	X
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35	---
basin big sagebrush	ARTRT	---	5-15	---	---	---	---
black greasewood	SAVE4	---	2-5	---	---	---	---
black sagebrush	ARARN	15-30	---	15-30	15-30	---	X
bud sagebrush	ARSP5	---	---	---	---	2-5	---
green ephedra	EPVI	---	---	---	---	---	X
pricklypear	OPUNT	---	---	---	---	---	X
rubber rabbitbrush	CHNA2	---	2-5	---	---	---	---
shadscale	ATCO	2-5	---	2-5	2-5	2-5	---
spiny hopsage	GRSP	---	---	---	---	5-15	---
winterfat	EULAS	5-10	---	5-10	5-10	---	---
Range site number		028AY004NV	028BY041NV	028AY004NV	028AY004NV	028AY028NV	028AY041NV
Potential production (lb/acre):							
Favorable years		500	1800	500	500	900	400
Normal years		325	1500	325	325	700	250
Unfavorable years		100	1100	100	100	400	150

1590--LUNING-LORAY ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		LUNING	LUNING	LORAY	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	35-45	25-35	15-25	X	35-45	5-10	15-25
King desertgrass	BLKI	---	---	2-5	---	---	---	---
Sandberg bluegrass	POSE	---	---	---	X	---	---	---
bottlebrush squirreltail	SIHY	---	2-5	---	X	---	2-5	5-10
galleta	HIJA	2-8	2-5	2-8	X	2-8	1-4	---
needleandthread	STCO4	2-8	---	---	X	2-8	---	---
sand dropseed	SPCR	2-5	2-5	---	---	2-5	---	---
King birdbeak	COKI	---	---	---	X	---	---	---
erigonum	ERIOG	---	---	---	X	---	---	---
globemallow	SPHAE	2-5	2-5	2-5	---	2-5	2-5	2-5
phlox	PHLOX	---	---	---	X	---	---	---
princesplume	STANL	---	2-5	---	---	---	---	---
Douglas rabbitbrush	CHVIS	---	---	---	X	---	---	---
Nevada ephedra	EPNE	---	2-5	---	---	---	2-15	---
Utah juniper	JUOS	---	---	---	X	---	---	---
black sagebrush	ARARN	---	---	---	X	---	---	---
bud sagebrush	ARSP5	2-10	2-5	5-10	---	2-10	---	---
fourwing saltbush	ATCA2	---	---	---	---	---	5-30	2-5
gray molly kochia	KOAMV	---	---	2-5	---	---	---	---
green ephedra	EPVI	---	---	---	X	---	---	---
horsebrush	TETRA3	---	5-10	---	---	---	---	---
other shrubs	SSSS	---	---	---	---	---	---	5-15
pricklypear	OPUNT	---	---	---	X	---	---	---
rabbitbrush	CHRY9	---	---	---	---	---	5-20	---
shadscale	ATCO	20-30	15-25	40-50	---	20-30	2-5	---
spiny hopsage	GRSP	---	---	---	---	---	5-20	---
winterfat	EULA5	5-15	5-10	2-8	---	5-15	---	50-60
Range site number		028AY018NV	028AY014NV	028AY012NV	028AY041NV	028AY018NV	028AY037NV	028AY030NV
Potential production (lb/acre):								
Favorable years		700	600	500	400	700	600	700
Normal years		500	400	300	250	500	500	500
Unfavorable years		300	200	200	150	300	400	350

1591--LUNING-IZAMATCH-BADLAND ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or inclusion number--						
		LUNING	IZAMATCH	BADLAND	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	35-45	25-35	---	10-25	15-25	40-50	---
King desertgrass	BLKI	---	---	---	---	2-5	---	---
Sandberg bluegrass	POSE	---	---	---	2-5	---	---	---
bottlebrush squirreltail	SIHY	---	2-5	---	---	---	---	---
galleta	HIJA	2-8	2-5	---	2-8	2-8	2-8	---
needleandthread	STCO4	2-8	---	---	2-10	---	---	---
sand dropseed	SPCR	2-5	2-5	---	---	---	---	---
globemallow	SPHAE	2-5	2-5	---	---	2-5	2-5	---
princesplume	STANL	---	2-5	---	---	---	---	---
Nevada sphegdra	EPNE	---	2-5	---	---	---	---	---
black sagebrush	ARARN	---	---	---	15-30	---	---	---
bud sagebrush	ARSP5	2-10	2-5	---	---	5-10	2-8	---
gray molly kochia	KOAMV	---	---	---	---	2-5	---	---
horsebrush	TETRA3	---	5-10	---	---	---	---	---
shadscale	ATCO	20-30	15-25	---	2-5	40-50	1-5	---
winterfat	EULAS	5-15	5-10	---	5-10	2-8	25-30	---
Range site number		028AY018NV	028AY014NV	None	028AY004NV	028AY012NV	028AY002NV	None
Potential production (lb/acre):								
Favorable years		700	600		500	500	800	
Normal years		500	400		325	300	600	
Unfavorable years		300	200		100	200	400	

1600--EAGLEPASS-AMTOFT ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		EAGLEPASS	AMTOFT	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORRY	---	5-15	10-25	---	15-25
Sandberg bluegrass	POSE	---	---	2-5	---	---
Scribner needlegrass	STSC2	5-10	---	---	---	---
blue grama	BOGR2	---	1-5	---	---	---
bluebunch wheatgrass	AGSP	---	30-40	---	---	---
bluegrass	POA++	---	2-5	---	---	---
bottlebrush squirreltail	SIHY	---	---	---	---	2-5
galleta	HIJA	2-4	---	2-8	---	2-5
needleandthread	STCO4	---	2-5	2-10	---	5-10
scarlet globemallow	SPCO	---	---	---	---	2-5
Nevada greaseweb	PONE2	2-5	---	---	---	---
Stansbury cliffrose	COMES	2-5	2-8	---	---	---
Wyoming big sagebrush	ARTRW	---	---	---	---	25-35
black sagebrush	ARARN	2-8	25-35	15-30	---	---
bud sagebrush	ARSP5	---	---	---	---	2-5
littleleaf mountainmahogany	CEIN7	60-70	---	---	---	---
shadscale	ATCO	---	---	2-5	---	2-5
spiny hopsage	GRSP	---	---	---	---	5-15
winterfat	EULA5	---	---	5-10	---	---
Range site number		028AY029NV	028AY034NV	028AY004NV	None	028AY028NV
Potential production (lb/acre):						
Favorable years		900	600	500		900
Normal years		700	400	325		700
Unfavorable years		500	200	100		400

1610--XERIC TORRIORTRENTS-ARMESPAN-BADLANDS ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		XERIC TORRIO	ARMESPAN	BADLAND	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	---	10-25	---	15-25	20-30	25-35	10-15
Sandberg bluegrass	POSE	---	2-5	---	---	---	---	---
alkali sacaton	SPAI	---	2-5	---	---	---	---	---
basin wildrye	ELCI2	40-60	---	---	---	---	---	---
bluegrass	POA++	2-5	---	---	---	---	---	---
bottlebrush squirreltail	SIHY	---	---	---	2-5	---	2-5	2-5
galleta	HIJA	---	2-8	---	2-5	2-5	2-5	---
needleandthread	STCO4	---	2-10	---	5-10	15-25	---	---
sand dropseed	SPCR	---	---	---	---	2-5	2-5	---
western wheatgrass	AGSM	5-10	---	---	---	---	---	---
wheatgrass	AGROP2	---	---	---	---	2-8	---	---
globemallow	SPHAE	---	---	---	---	---	2-5	---
princesplume	STANL	---	---	---	---	---	2-5	---
scarlet globemallow	SPCO	---	---	---	2-5	---	---	---
Nevada ephedra	EPNE	---	---	---	---	---	2-5	---
Wyoming big sagebrush	ARTRW	---	---	---	25-35	10-20	---	---
basin big sagebrush	ARTRT	5-15	---	---	---	---	---	---
black greasewood	SAVE4	2-5	---	---	---	---	---	15-25
black sagebrush	ARARN	---	15-30	---	---	---	---	---
bud sagebrush	ARSP5	---	---	---	2-5	---	2-5	---
fourwing saltbush	ATCA2	---	---	---	---	5-15	---	---
horsebrush	TETRA3	---	---	---	---	---	5-10	---
rubber rabbitbrush	CHNA2	2-5	---	---	---	---	---	---
shadscale	ATCO	---	2-5	---	2-5	---	15-25	---
spiny hopsage	GRSP	---	---	---	5-15	---	---	40-60
winterfat	EULA5	---	5-10	---	---	5-10	5-10	---
Range site number		028BY041NV	028AY004NV	None	028AY028NV	028AY005NV	028AY014NV	028AY032NV
Potential production (lb/acre):								
Favorable years		1800	500		900	1000	600	1000
Normal years		1500	325		700	700	400	800
Unfavorable years		1100	100		400	400	200	600

1620--KOLDA-DUFFER-SONOMA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		KOLDA	DUFFER	SONOMA	Inclusion 1	Inclusion 2	Inclusion 3
Baltic rush	JUBA	---	2-8	---	---	---	---
alkali cordgrass	SPGR	---	10-15	---	---	---	---
alkali sacaton	SPAI	---	40-50	---	15-40	---	---
alkaligrass	PUCCI	---	2-5	---	---	---	---
basin wildrye	ELCI2	---	---	---	40-60	---	2-5
bluegrass	POA++	---	2-8	---	---	T-20	25-40
bluejoint reedgrass	CACA4	---	---	70-80	---	---	---
bulrush	SCIRP	30-50	---	---	---	---	---
cattail	TYPHA	20-40	---	---	---	---	---
foxtail barley	HOJU	---	---	---	---	1-20	---
giantreed	ARDO4	5-10	---	---	---	---	---
inland saltgrass	DISPS2	---	2-5	---	2-5	---	---
mat muhly	MURI	---	---	---	---	T-8	2-5
rush	JunCO	2-8	---	2-5	---	T-20	5-15
sedge	CAREX	2-8	5-10	2-8	---	T-20	20-30
western wheatgrass	AGSM	---	---	---	2-5	---	---
cinquefoil	POTEN	---	---	2-8	---	T-10	2-5
groundsel	SENEC	---	---	---	---	---	2-5
povertyweed	IVAX	---	---	---	---	T-20	---
black greasewood	SAVE4	---	---	---	5-15	---	---
rubber rabbitbrush	CHNA2	---	---	---	2-5	---	---
Range site number		028BY044NV	028BY002NV	028BY099NV	028BY004NV	028BY098NV	028BY001NV
Potential production (lb/acre):							
Favorable years		4000	1500	1600	2200	1500	4000
Normal years		2800	1000	1200	1500	400	2000
Unfavorable years		2000	700	800	800	0	1200

1621--KOLDA-RUBYLAKE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or inclusion number--				
		KOLDA	RUBYLAKE	KOLDA	Inclusion 1	Inclusion 2
Baltic rush	JUBA	---	2-8	---	---	---
alkali cordgrass	SPGR	---	10-15	---	---	---
alkali sacaton	SPAI	---	40-50	---	---	---
alkaligrass	PUCCI	---	2-5	---	---	---
bluegrass	POA++	---	2-8	---	---	T-20
bulrush	SCIRP	30-50	---	30-50	---	---
cattail	TYPHA	20-40	---	20-40	---	---
foxtail barley	BOJU	---	---	---	---	1-20
giantreed	ARDO4	5-10	---	5-10	---	---
inland saltgrass	DISPS2	---	2-5	---	---	---
mat muhly	MURI	---	---	---	---	T-8
rush	JunCU	2-8	---	2-8	---	T-20
sedge	CAREX	2-8	5-10	2-8	---	T-20
cinquefoil	POTEN	---	---	---	---	T-10
povertyweed	IVAX	---	---	---	---	T-20
Range site number		028BY044NV	028BY002NV	028BY044NV	None	028BY098NV
Potential production (lb/acre):						
Favorable years		4000	1500	4000		1500
Normal years		2800	1000	2800		400
Unfavorable years		2000	700	2000		0

1622--KOLDA SILT LOAM, 0 TO 1 PERCENT SLOPES

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions		
		Soil name or Inclusion number--		
		KOLDA	Inclusion 1	Inclusion 2
Baltic rush	JUBA	---	2-5	2-8
alkali bluegrass	POJU	---	2-10	---
alkali cordgrass	SPGR	---	---	10-15
alkali muhly	MUAS	---	2-5	---
alkali sacaton	SPAI	---	2-10	40-50
alkaligrass	PUCCI	---	---	2-5
bluegrass	POA++	---	---	2-8
bulrush	SCIRP	30-50	---	---
cattail	TYPHA	20-40	---	---
giantreed	ARDO4	5-10	---	---
inland saltgrass	DISPS2	---	5-15	2-5
rush	JunCU	2-8	---	---
sedge	CAREX	2-8	10-20	5-10
western wheatgrass	AGSM	---	35-50	---
wildrye	ELYMU	---	5-15	---
Range site number		028BY044NV	028BY012NV	028BY002NV
Potential production (lb/acre):				
Favorable years		4000	2000	1500
Normal years		2800	1500	1000
Unfavorable years		2000	1000	700

1623--KOLDA-WATER ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		KOLDA	WATER	Inclusion 1	Inclusion 2
Baltic rush	JUBA	---	---	2-5	2-8
alkali bluegrass	POJU	---	---	2-10	---
alkali cordgrass	SPGR	---	---	---	10-15
alkali muhly	MUAS	---	---	2-5	---
alkali sacaton	SPAI	---	---	2-10	40-50
alkaligrass	PUCCI	---	---	---	2-5
bluegrass	POA++	---	---	---	2-8
bulrush	SCIRP	30-50	---	---	---
cattail	TYPHA	20-40	---	---	---
giantreed	ARDO4	5-10	---	---	---
inland saltgrass	DISPS2	---	---	5-15	2-5
rush	JunCU	2-8	---	---	---
sedge	CAREX	2-8	---	10-20	5-10
western wheatgrass	AGSM	---	---	35-50	---
wildrye	ELYMU	---	---	5-15	---
Range site number		028BY044NV	None	028BY012NV	028BY002NV
Potential production (lb/acre):					
Favorable years		4000		2000	1500
Normal years		2800		1500	1000
Unfavorable years		2000		1000	700

1630--POOKALOO-CAVEHILL, COOL-ROCK OUTCROP ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		POOKALOO	CAVEHILL	ROCK OUTCROP	Inclusion 1	Inclusion 2
Canby bluegrass	POCA	---	X	---	---	X
Idaho fescue	FEID	---	---	---	15-25	---
Indian ricegrass	ORHY	X	X	---	---	X
Sandberg bluegrass	POSE	---	---	---	---	X
Thurber needlegrass	STTH2	X	---	---	---	X
basin wildrye	ELCI2	X	---	---	---	X
bluebunch wheatgrass	AGSP	X	X	---	5-15	X
bluegrass	POA++	X	X	---	2-5	---
bottlebrush squirreltail	SIBY	X	X	---	---	X
needlegrass	STIPA	---	---	---	2-8	---
arrowleaf balsamroot	BASA3	X	X	---	---	X
tapertip hawksbeard	CRAC2	X	X	---	---	X
Stansbury cliffrose	COMES	X	---	---	---	---
Wyoming big sagebrush	ARTRW	---	X	---	---	---
antelope bitterbrush	PUTR2	X	X	---	2-5	X
black sagebrush	ARARN	X	---	---	---	---
curlleaf mountainmahogany	CELE3	X	---	---	---	---
ephedra	EPHED	---	X	---	---	X
mountain big sagebrush	ARVA2	---	---	---	5-15	X
serviceberry	AMELA	X	---	---	---	X
snowberry	SYMPH	---	---	---	2-8	---
Utah juniper	JUOS	X	X	---	---	X
singleleaf pinyon	PIMO	X	X	---	---	X
Range site number		028BY060NV	028BY061NV	None	025XY071NV	028BY062NV
Potential production (lb/acre):						
Favorable years		500	500		1700	700
Normal years		300	300		1300	500
Unfavorable years		250	200		900	300

1631--POOKALOO-TECOMar-WARDBAY ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		POOKALOO	TECOMar	WARDBAY	Inclusion 1	Inclusion 2	Inclusion 3
Canby bluegrass	POCA	---	---	---	X	---	---
Idaho fescue	PEID	---	---	30-40	---	---	---
Indian ricegrass	ORHY	X	10-20	---	---	---	---
Nevada bluegrass	PONE3	---	---	2-5	---	---	5-10
Sandberg bluegrass	POSE	---	---	---	X	---	---
Thurber needlegrass	STTH2	X	---	---	---	---	---
basin wildrye	ELCY2	X	---	2-10	X	---	60-70
bluebunch wheatgrass	AGSP	X	20-40	15-30	X	---	---
bluegrass	POA++	X	2-5	---	---	---	---
bottlebrush squirreltail	SIHY	X	---	---	X	---	---
mat muhly	MURI	---	---	---	---	---	2-8
muttongrass	POFE	---	---	---	X	---	---
needleandthread	STCO4	---	2-5	---	---	---	---
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8
arrowleaf balsamroot	BASA3	X	---	2-5	X	---	---
goldenweed	HAPLO2	---	2-5	---	---	---	---
tapertip hawksbeard	CRAC2	X	2-5	2-5	X	---	---
Stansbury cliffrose	COMES	X	---	---	---	---	---
antelope bitterbrush	PUTR2	X	---	5-10	X	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10
black sagebrush	ARARN	X	25-35	---	---	---	---
curlleaf mountainmahogany	CELE3	X	---	---	X	---	---
mountain big sagebrush	ARVA2	---	---	10-20	X	---	---
serviceberry	AMELA	X	---	---	X	---	---
shadscale	ATCO	---	2-5	---	---	---	---
snowberry	SYMPH	---	---	---	X	---	---
winterfat	EULA5	---	2-5	---	---	---	---
Utah juniper	JUOS	X	---	---	X	---	---
singleleaf pinyon	PIMO	X	---	---	X	---	---
Range site number		028BY060NV	028BY008NV	025XY012NV	028BY058NV	None	025XY003NV
Potential production (lb/acra):							
Favorable years		500	600	1400	500		4500
Normal years		300	400	1000	300		3500
Unfavorable years		250	200	700	200		2000

1640--JunGO ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		JunGO	JunGO	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	10-25	20-30	20-30	2-10	10-25	15-25
Sandberg bluegrass	POSE	2-5	---	---	2-8	2-5	2-5
bluebunch wheatgrass	AGSP	---	---	---	---	---	2-8
bottlebrush squirreltail	SIHY	---	---	---	---	---	2-5
galleta	HIJA	2-8	2-5	2-5	1-5	2-8	2-8
needleandthread	STCO4	2-10	15-25	15-25	1-5	2-10	---
sand dropseed	SPCR	---	2-5	2-5	---	---	---
globemallow	SPHA8	---	2-5	2-5	---	---	---
Nevada sphaedra	EPNE	---	---	---	5-10	---	---
Utah juniper	JUOS	---	---	---	---	---	5-15
big sagebrush	ARTR2	---	---	---	30-45	---	---
black sagebrush	ARARN	15-30	15-30	15-30	---	15-30	40-50
fourwing saltbush	ATCA2	---	2-8	2-8	---	---	---
horsebrush	TETRA3	---	---	---	2-8	---	---
other shrubs	SSSS	---	---	---	5-25	---	---
rubber rabbitbrush	CHNA2	---	---	---	5-20	---	---
shadscale	ATCO	2-5	---	---	---	2-5	---
spiny hopsage	GRSP	---	---	---	2-8	---	---
winterfat	EULA5	5-10	2-5	2-5	---	5-10	---
Range site number		028AY004NV	028AY013NV	028AY013NV	028AY038NV	028AY004NV	028AY027NV
Potential production (lb/acre):							
Favorable years		500	700	700	1000	500	400
Normal years		325	500	500	700	325	350
Unfavorable years		100	300	300	500	100	125

1650--SHANTOWN-ZORRAVISTA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		SHANTOWN	ZORRAVISTA	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORHY	20-30	15-25	20-30	20-30	20-30	2-5
Sandberg bluegrass	POSE	2-5	---	2-5	2-5	2-5	---
Thurber needlegrass	STTH2	---	---	---	---	---	30-40
bluebunch wheatgrass	AGSP	---	---	---	---	---	15-30
bluegrass	POA++	---	---	---	---	---	2-8
bottlebrush squizreiltail	SIHY	2-8	---	2-8	2-8	2-8	---
needleandthread	STCO4	10-20	15-25	10-20	10-20	10-20	2-8
thickspike wheatgrass	AGDA	---	5-15	---	---	---	---
arrowleaf balsamroot	BASAJ	---	---	---	---	---	2-5
tapertip hawksbeard	CRAC2	---	---	---	---	---	2-5
Wyoming big sagebrush	ARTRW	25-35	---	25-35	25-35	25-35	---
antelope bitterbrush	PUTR2	---	---	---	---	---	2-10
big sagebrush	ARTR2	---	15-25	---	---	---	15-25
fourwing saltbush	ATCA2	---	2-8	---	---	---	---
rabbitbrush	CHRY89	2-5	2-5	2-5	2-5	2-5	---
winterfat	EULA5	---	2-5	---	---	---	---
Range site number		028BY010NV	028BY005NV	028BY010NV	028BY010NV	028BY010NV	028BY007NV
Potential production (lb/acre):							
Favorable years		800	800	800	800	800	1000
Normal years		600	600	600	600	600	800
Unfavorable years		400	400	400	400	400	600

1651--SHANTOWN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		SHANTOWN	SHANTOWN	Inclusion 1	Inclusion 2
Indian ricegrass	ORHY	20-30	2-5	---	2-10
Sandberg bluegrass	POSE	2-5	---	---	---
Thurber needlegrass	STH2	---	30-40	---	---
alkali sacaton	SPAI	---	---	15-40	---
basin wildrye	ELCI2	---	---	40-60	10-20
bluebunch wheatgrass	AGSP	---	15-30	---	---
bluegrass	POA++	---	2-8	---	---
bottlebrush squirreltail	SIHY	2-8	---	---	---
inland saltgrass	DISPS2	---	---	2-5	---
needleandthread	STCO4	10-20	2-8	---	---
western wheatgrass	AGSM	---	---	2-5	---
arrowleaf balsamroot	BASA3	---	2-5	---	---
tapertip hawksbeard	CRAC2	---	2-5	---	---
Wyoming big sagebrush	ARTRW	25-35	---	---	---
antelope bitterbrush	PUTR2	---	2-10	---	---
big sagebrush	ARTR2	---	15-25	---	20-30
black greasewood	SAVE4	---	---	5-15	30-40
rabbitbrush	CHRY89	2-5	---	---	---
rubber rabbitbrush	CHNA2	---	---	2-5	2-5
Range site number		028BY010NV	028BY007NV	028BY004NV	028BY028NV
Potential production (lb/acre):					
Favorable years		800	1000	2200	800
Normal years		600	800	1500	600
Unfavorable years		400	600	800	400

1660--WENDANE-LOGAN ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		WENDANE	LOGAN	Inclusion 1	Inclusion 2	Inclusion 3
Baltic rush	JOBA	2-8	---	---	---	---
alkali cordgrass	SPGR	10-15	---	---	---	---
alkali sacaton	SPAI	40-50	5-15	---	15-40	---
alkaligrass	PUCCI	2-5	---	---	---	---
basin wildrye	ELCI2	---	2-8	2-5	40-60	---
bluegrass	POA++	2-8	25-50	25-40	---	---
bulrush	SCIRP	---	---	---	---	30-50
cattail	TYFRA	---	---	---	---	20-40
giantreed	ARDO4	---	---	---	---	5-10
inland saltgrass	DISPS2	2-5	---	---	2-5	---
mat muhly	MURI	---	30-40	2-5	---	---
rush	JunCU	---	---	5-15	---	2-8
sedge	CAREX	5-10	---	20-30	---	2-8
western wheatgrass	AGSM	---	2-8	---	2-5	---
cinquefoil	POTEN	---	---	2-5	---	---
groundsel	SENEC	---	---	2-5	---	---
black greasewood	SAVE4	---	---	---	5-15	---
rubber rabbitbrush	CHNA2	---	---	---	2-5	---
Range site number		028BY002NV	028BY100NV	028BY001NV	028BY004NV	028BY044NV
Potential production (lb/acre):						
Favorable years		1500	1500	4000	2200	4000
Normal years		1000	1100	2000	1500	2800
Unfavorable years		700	700	1200	800	2000

1670--WENDANE-LOGAN-WENDANE, OCCASIONALLY FLOODED ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		WENDANE	LOGAN	WENDANE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Baltic rush	JUBA	---	---	2-8	---	---	---	---
alkali cordgrass	SPGR	---	---	10-15	---	---	---	---
alkali sacaton	SPAI	15-40	5-15	40-50	---	---	---	20-30
alkaligrass	PUCCI	---	---	2-5	---	---	---	---
basin wildrye	ELCI2	40-60	2-8	---	---	10-20	---	2-5
bluegrass	POA++	---	25-50	2-8	---	---	T-20	---
bottlebrush squirreltail	SIBY	---	---	---	---	2-5	---	---
foxtail barley	HOJU	---	---	---	---	---	1-20	---
inland saltgrass	DISPS2	2-5	---	2-5	---	2-10	---	---
mat muhly	MURI	---	30-40	---	---	---	T-8	30-40
rush	JunCU	---	---	---	---	---	T-20	5-10
sedge	CAREX	---	---	5-10	---	---	T-20	---
western wheatgrass	AGSM	2-5	2-8	---	---	---	---	---
aster	ASTER	---	---	---	---	---	---	2-5
cinquefoil	POTEN	---	---	---	---	---	T-10	---
povertyweed	IVAX	---	---	---	---	---	T-20	---
Douglas rabbitbrush	CHVI8	---	---	---	---	---	---	1-5
basin big sagebrush	ARTRT	---	---	---	---	---	---	2-5
black greasewood	SAVE4	5-15	---	---	---	50-60	---	1-5
rubber rabbitbrush	CENA2	2-5	---	---	---	---	---	5-10

Range site number	028BY004NV	028BY100NV	028BY002NV	None	028BY069NV	028BY098NV	028BY031NV
Potential production (lb/acre):							
Favorable years	2200	1500	1500		800	1500	1200
Normal years	1500	1100	1000		600	400	1000
Unfavorable years	800	700	700		400	0	400

1680--RUBYLAKE-KOLDA-WENDANE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or inclusion number--						
		RUBYLAKE	KOLDA	WENDANE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Baltic rush	JUBA	2-8	---	---	---	---	---	---
alkali cordgrass	SPGR	10-15	---	---	---	---	---	---
alkali sacaton	SPAI	40-50	---	15-40	5-15	---	5-10	---
alkaligrass	PUCCI	2-5	---	---	---	---	---	---
basin wildrye	ELCI2	---	---	40-60	2-8	---	2-5	---
bluegrass	POA++	2-8	---	---	25-50	T-20	---	---
bulrush	SCIRP	---	30-50	---	---	---	---	---
cattail	TYPHA	---	20-40	---	---	---	---	---
foxtail barley	HOJU	---	---	---	---	1-20	---	---
giantreed	ARDO4	---	5-10	---	---	---	---	---
inland saltgrass	DISPS2	2-5	---	2-5	---	---	2-8	---
mat muhly	MURI	---	---	---	30-40	T-8	---	---
rush	JuncU	---	2-8	---	---	T-20	---	---
sedge	CAREX	5-10	2-8	---	---	T-20	---	---
western wheatgrass	AGSM	---	---	2-5	2-8	---	---	---
cinquefoil	POTEN	---	---	---	---	T-10	---	---
povertyweed	IVAX	---	---	---	---	T-20	---	---
black greasewood	SAVE4	---	---	5-15	---	---	60-75	---
rubber rabbitbrush	CHNA2	---	---	2-5	---	---	2-5	---
shadscale	ATCO	---	---	---	---	---	2-5	---

Range site number	028BY002NV	028BY044NV	028BY004NV	028BY100NV	028BY098NV	028BY020NV	None
Potential production (lb/acre):							
Favorable years	1500	4000	2200	1500	1500	500	
Normal years	1000	2800	1500	1100	400	300	
Unfavorable years	700	2000	800	700	0	150	

1681--WENDANE-LOGAN-UMBERLAND ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		WENDANE	LOGAN	UMBERLAND	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
alkali sacaton	SPAI	15-40	5-15	5-10	5-15	5-10	15-40	---
basin wildrye	ELCI2	40-60	2-8	2-5	2-8	2-5	40-60	---
bluegrass	POA++	---	25-50	---	25-50	---	---	T-20
foxtail barley	HOJU	---	---	---	---	---	---	1-20
inland saltgrass	DISPS2	2-5	---	2-8	---	2-8	2-5	---
mat muhly	MURI	---	30-40	---	30-40	---	---	T-8
rush	JunCU	---	---	---	---	---	---	T-20
sedge	CAREX	---	---	---	---	---	---	T-20
western wheatgrass	AGSM	2-5	2-8	---	2-8	---	2-5	---
cinquefoil	POTEN	---	---	---	---	---	---	T-10
povertyweed	IVAX	---	---	---	---	---	---	T-20
black greasewood	SAVE4	5-15	---	60-75	---	60-75	5-15	---
rubber rabbitbrush	CHNA2	2-5	---	2-5	---	2-5	2-5	---
shadscale	ATCO	---	---	2-5	---	2-5	---	---
Range site number		028BY004NV	028BY100NV	028BY020NV	028BY100NV	028BY020NV	028BY004NV	028BY098NV
Potential production (lb/acre):								
Favorable years		2200	1500	500	1500	500	2200	1500
Normal years		1500	1100	300	1100	300	1500	400
Unfavorable years		800	700	150	700	150	800	0

1690--KRENKA-SECREPASS ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		KRENKA	SECREPASS	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	2-5	---	---	---	---	---
Idaho fescue	FEID	2-10	40-50	---	---	---	15-30
Nevada bluegrass	PONE3	2-5	---	40-60	---	5-10	---
alpine timothy	PHAL2	---	---	20-40	---	5-10	---
basin wildrye	ELCI2	---	---	2-8	---	---	---
bluebunch wheatgrass	AGSP	2-5	2-5	---	---	---	---
bluegrass	POA++	---	5-15	---	X	---	---
bulbous oniongrass	MEBU	---	---	---	---	---	2-8
mat muhly	MURI	---	---	2-8	---	---	---
meadow barley	HOBR2	---	---	2-5	---	---	---
mountain brome	BRCA5	5-15	---	---	---	---	10-20
onespike oatgrass	DAUN	---	2-10	---	---	---	---
rush	JunCU	---	---	---	X	---	---
sedge	CAREX	---	---	2-8	X	5-10	---
slender wheatgrass	AGTR	5-15	---	---	---	---	2-8
spike-fescue	LEKI2	2-10	---	---	---	---	---
streambank wheatgrass	AGDAR	---	---	---	X	---	---
tufted hairgrass	DeCE	---	---	---	---	30-60	---
western wheatgrass	AGSM	---	---	---	X	---	---
Sierra clover	TRWO	---	---	---	---	2-5	---
cinquefoil	POTEN	---	---	---	---	2-5	---
clover	TRIPO	---	---	---	X	---	---
lupine	LUPIN	---	---	---	---	---	10-15
wyethia	WYETH	---	---	---	---	---	20-30
yarrow	ACHIL	---	---	---	X	---	---
Utah serviceberry	AMUT	1-5	---	---	---	---	---
Woods rose	ROWO	---	---	---	X	---	---
antelope bitterbrush	POTR2	1-5	---	---	---	---	---
common chokecherry	PRVI	1-5	---	---	---	---	---
currant	RIBES	---	---	---	X	---	---
low sagebrush	ARAR8	---	10-20	---	---	---	---
mountain big sagebrush	ARVA2	5-15	---	---	---	---	---
snowberry	SYMPH	2-15	---	---	---	---	---
narrowleaf cottonwood	POAN3	---	---	---	X	---	---
willow	SALIX	---	---	---	X	---	---

Range site number	025XY004NV	025XY032NV	025XY006NV	025XY053NV	025XY005NV	025XY047NV
Potential production (lb/acre):						
Favorable years	2800	800	2000	2500	3000	2000
Normal years	1800	600	1300	2000	1700	1500
Unfavorable years	1200	400	800	1000	1000	1000

1700--HEECHEE-RUBICITY ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		HEECHEE	RUBICITY	HEECHEE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	2-5	---	---	---
Idaho fescue	FEID	15-30	30-40	15-30	2-10	X	30-50	---
Nevada bluegrass	PONE3	---	2-5	---	2-5	X	---	40-60
Thurber needlegrass	STTH2	2-5	---	2-5	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	---	20-40
basin wildrye	ELCI2	---	2-10	---	---	---	---	2-8
bluebunch wheatgrass	AGSP	10-20	15-30	10-20	2-5	---	15-30	---
bluegrass	POA++	---	---	---	---	---	2-10	---
mat muhly	MURI	---	---	---	---	---	---	2-8
meadow barley	HOBR2	---	---	---	---	---	---	2-5
mountain brome	BRCA5	---	---	---	5-15	X	---	---
sedge	CAREX	---	---	---	---	X	---	2-8
slender wheatgrass	AGTR	---	---	---	5-15	X	---	---
spike-fescue	LEKI2	---	---	---	2-10	---	---	---
arrowleaf balsamroot	BASA3	---	2-5	---	---	---	---	---
groundsel	SENEC	---	---	---	---	X	---	---
tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---	---
yarrow	ACHIL	---	---	---	---	X	---	---
Utah serviceberry	AMUT	---	---	---	1-5	---	---	---
Woods rose	ROWO	---	---	---	---	X	---	---
antelope bitterbrush	PATR2	20-40	5-10	20-40	1-5	---	2-5	---
common chokecherry	PRVI	---	---	---	1-5	---	---	---
low sagebrush	ARAR8	---	---	---	---	---	15-25	---
mountain big sagebrush	ARVA2	5-10	10-20	5-10	5-15	---	---	---
snowberry	SYMPH	---	---	---	2-15	---	---	---
quaking aspen	POTRT	---	---	---	---	X	---	---
Range site number		025XY007NV	025XY012NV	025XY007NV	025XY004NV	025XY064NV	025XY017NV	025XY006NV
Potential production (lb/acre):								
Favorable years		2300	1400	2300	2800	1600	900	2000
Normal years		1400	1000	1400	1800	1300	700	1300
Unfavorable years		900	700	900	1200	1000	400	800

1702--HEECHEE-MCIVEY-RUBICITY ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		HEECHEE	MCIVEY	RUBICITY	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	15-30	30-40	30-40	---	---	X	---
Nevada bluegrass	PONE3	---	2-5	2-5	---	5-10	X	5-10
Thurber needlegrass	STTH2	2-5	---	---	10-20	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	---	5-10
basin wildrye	ELCI2	---	2-10	2-10	2-8	60-70	---	---
bluebunch wheatgrass	AGSP	10-20	15-30	15-30	20-35	---	---	---
bluegrass	POA++	---	---	---	2-10	---	---	---
mat muhly	MURI	---	---	---	---	2-8	---	---
mountain brome	BRCA5	---	---	---	---	---	X	---
sedge	CAREX	---	---	---	---	---	X	5-10
slender wheatgrass	AGTR	---	---	---	---	---	X	---
streambank wheatgrass	AGDAR	---	---	---	---	2-8	---	---
tufted hairgrass	DecE	---	---	---	---	---	---	30-60
Sierra clover	TRWO	---	---	---	---	---	---	2-5
arrowleaf balsamroot	BASA3	---	2-5	2-5	---	---	---	---
cinquefoil	POTEN	---	---	---	---	---	---	2-5
groundsel	SENEC	---	---	---	---	---	X	---
tapertip hawksbeard	CRAC2	---	2-5	2-5	---	---	---	---
yarrow	ACHIL	---	---	---	---	---	X	---
Woods rose	ROWO	---	---	---	---	---	X	---
antelope bitterbrush	POTR2	20-40	5-10	5-10	2-8	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	5-10	---	---
big sagebrush	ARTR2	---	---	---	10-20	---	---	---
mountain big sagebrush	ARVA2	5-10	10-20	10-20	---	---	---	---
quaking aspen	POTRT	---	---	---	---	---	X	---
Range site number		025XY007NV	025XY012NV	025XY012NV	025XY014NV	025XY003NV	025XY064NV	025XY005NV
Potential production (lb/acre):								
Favorable years		2300	1400	1400	1000	4500	1600	3000
Normal years		1400	1000	1000	800	3500	1300	1700
Unfavorable years		900	700	700	600	2000	1000	1000

1710--JAMES CANYON-WENDANE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		JAMES CANYON	WENDANE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Baltic rush	JUBA	---	---	---	---	2-8	---
alkali cordgrass	SPGR	---	---	---	---	10-15	---
alkali sacaton	SPAI	5-15	15-40	---	20-30	40-50	5-15
alkaligrass	PUCCI	---	---	---	---	2-5	---
basin wildrye	ELCI2	2-8	40-60	2-5	2-5	---	2-8
bluegrass	POA++	25-50	---	25-40	---	2-8	25-50
inland saltgrass	DISPS2	---	2-5	---	---	2-5	---
mat muhly	MURI	30-40	---	2-5	30-40	---	30-40
rush	JunCU	---	---	5-15	5-10	---	---
sedge	CAREX	---	---	20-30	---	5-10	---
western wheatgrass	AGSM	2-8	2-5	---	---	---	2-8
aster	ASTER	---	---	---	2-5	---	---
cinquefoil	POTEN	---	---	2-5	---	---	---
groundsel	SENEC	---	---	2-5	---	---	---
Douglas rabbitbrush	CHVI8	---	---	---	1-5	---	---
basin big sagebrush	ARTRT	---	---	---	2-5	---	---
black greasewood	SAVE4	---	5-15	---	1-5	---	---
rubber rabbitbrush	CHNA2	---	2-5	---	5-10	---	---
Range site number		028BY100NV	028BY004NV	028BY001NV	028BY031NV	028BY002NV	028BY100NV
Potential production (lb/acre):							
Favorable years		1500	2200	4000	1200	1500	1500
Normal years		1100	1500	2000	1000	1000	1100
Unfavorable years		700	800	1200	400	700	700

1711--JAMES CANYON-WENDANE-WENDANE, OCCASIONALLY FLOODED ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		JAMES CANYON	WENDANE	WENDANE	Inclusion 1	Inclusion 2	Inclusion 3
Baltic rush	JUBA	---	---	2-8	---	---	---
Indian ricegrass	OREY	---	---	---	2-10	---	---
alkali cordgrass	SPQR	---	---	10-15	---	---	---
alkali sacaton	SPAI	5-15	15-40	40-50	---	5-15	20-30
alkaligrass	PUCCI	---	---	2-5	---	---	---
basin wildrye	ELCI2	2-8	40-60	---	10-20	2-8	2-5
bluegrass	POA++	25-50	---	2-8	---	25-50	---
inland saltgrass	DISPS2	---	2-5	2-5	---	---	---
mat muhly	MURI	30-40	---	---	---	30-40	30-40
rush	JunCU	---	---	---	---	---	5-10
sedge	CAREX	---	---	5-10	---	---	---
western wheatgrass	AGSM	2-8	2-5	---	---	2-8	---
aster	ASTER	---	---	---	---	---	2-5
Douglas rabbitbrush	CHV18	---	---	---	---	---	1-5
basin big sagebrush	ARTRT	---	---	---	---	---	2-5
big sagebrush	ARTR2	---	---	---	20-30	---	---
black greasewood	SAVE4	---	5-15	---	30-40	---	1-5
rubber rabbitbrush	CHNA2	---	2-5	---	2-5	---	5-10
Range site number		028BY100NV	028BY004NV	028BY002NV	028BY028NV	028BY100NV	028BY031NV
Potential production (lb/acre):							
Favorable years		1500	2200	1500	800	1500	1200
Normal years		1100	1500	1000	600	1100	1000
Unfavorable years		700	800	700	400	700	400

1720--WELCH LOAM, 0 TO 4 PERCENT SLOPES

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions			
		Soil name or Inclusion number--			
		WELCH	Inclusion 1	Inclusion 2	Inclusion 3
alkali sacaton	SPAX	---	---	5-15	---
basin wildrye	ELCI2	2-5	2-5	2-8	2-5
bluegrass	POA++	25-40	25-40	25-50	25-40
mat muhly	MURI	2-5	2-5	30-40	2-5
rush	JuncU	5-15	5-15	---	5-15
sedge	CAREX	20-30	20-30	---	20-30
western wheatgrass	AGSM	---	---	2-8	---
cinquefoil	POTEN	2-5	2-5	---	2-5
groundsel	SENEC	2-5	2-5	---	2-5
Range site number		028BY001NV	028BY001NV	028BY100NV	028BY001NV
Potential production (lb/acre):					
Favorable years		4000	4000	1500	4000
Normal years		2000	2000	1100	2000
Unfavorable years		1200	1200	700	1200

1721--WELCH-WELSUM COMPLEX

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		WELCH	WELSUM	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Baltic rush	JUBA	---	---	---	2-8	---	---
alkali cordgrass	SPGR	---	---	---	10-15	---	---
alkali sacaton	SPAI	---	5-15	15-40	40-50	---	5-15
alkaligrass	PUCCI	---	---	---	2-5	---	---
basin wildrye	ELCI2	2-5	2-8	40-60	---	2-5	2-8
bluegrass	POA++	25-40	25-50	---	2-8	25-40	25-50
inland saltgrass	DISPS2	---	---	2-5	2-5	---	---
mat muhly	MURI	2-5	30-40	---	---	2-5	30-40
rush	JunCU	5-15	---	---	---	5-15	---
sedge	CAREX	20-30	---	---	5-10	20-30	---
western wheatgrass	AGSM	---	2-8	2-5	---	---	2-8
cinquefoil	POTEN	2-5	---	---	---	2-5	---
groundsel	SENEC	2-5	---	---	---	2-5	---
black greasewood	SAVE4	---	---	5-15	---	---	---
rubber rabbitbrush	CHNA2	---	---	2-5	---	---	---
Range site number		028BY001NV	028BY100NV	028BY004NV	028BY002NV	028BY001NV	028BY100NV
Potential production (lb/acre):							
Favorable years		4000	1500	2200	1500	4000	1500
Normal years		2000	1100	1500	1000	2000	1100
Unfavorable years		1200	700	800	700	1200	700

1722--WELCH-SLIPBACK ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		WELCH	SLIPBACK	WELCH	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	2-10	---	---	2-10	---
alkali sacaton	SPAI	20-30	---	5-15	15-40	---	20-30
basin wildrye	ELCT2	2-5	10-20	2-8	40-60	10-20	2-5
bluegrass	POA++	---	---	25-50	---	---	---
inland saltgrass	DISPS2	---	---	---	2-5	---	---
mat muhly	MURI	30-40	---	30-40	---	---	30-40
rush	JunCU	5-10	---	---	---	---	5-10
western wheatgrass	AGSM	---	---	2-8	2-5	---	---
aster	ASTER	2-5	---	---	---	---	2-5
Douglas rabbitbrush	CHVI8	1-5	---	---	---	---	1-5
basin big sagebrush	ARTRT	2-5	---	---	---	---	2-5
big sagebrush	ARTR2	---	20-30	---	---	20-30	---
black greasewood	SAVE4	1-5	30-40	---	5-15	30-40	1-5
rubber rabbitbrush	CHNA2	5-10	2-5	---	2-5	2-5	5-10
Range site number		028BY031NV	028BY028NV	028BY100NV	028BY004NV	028BY028NV	028BY031NV
Potential production (lb/acre):							
Favorable years		1200	800	1500	2200	800	1200
Normal years		1000	600	1100	1500	600	1000
Unfavorable years		400	400	700	800	400	400

1723--WELCH ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		WELCH	WELCH	Inclusion 1	Inclusion 2	Inclusion 3
Nevada bluegrass	PONE3	---	5-10	---	---	---
alkali sacaton	SPAI	5-15	---	15-40	5-15	---
basin wildrye	ELCI2	2-8	60-70	40-60	2-8	2-5
bluegrass	POA++	25-50	---	---	25-50	25-40
inland saltgrass	DISPS2	---	---	2-5	---	---
mat muhly	MURI	30-40	2-8	---	30-40	2-5
rush	JunCU	---	---	---	---	5-15
sedge	CAREX	---	---	---	---	20-30
streambank wheatgrass	AGDAR	---	2-8	---	---	---
western wheatgrass	AGSM	2-8	---	2-5	2-8	---
cinquefoil	POTEN	---	---	---	---	2-5
groundsel	SENEC	---	---	---	---	2-5
basin big sagebrush	ARTRT	---	5-10	---	---	---
black greasewood	SAVE4	---	---	5-15	---	---
rubber rabbitbrush	CHNA2	---	---	2-5	---	---
Range site number		028BY100NV	025XY003NV	028BY004NV	028BY100NV	028BY001NV
Potential production (lb/acre):						
Favorable years		1500	4500	2200	1500	4000
Normal years		1100	3500	1500	1100	2000
Unfavorable years		700	2000	800	700	1200

1730--MCIVEY-DONNA ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		MCIVEY	DONNA	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	---	2-5	---
Idaho fescue	FEID	30-40	---	X	---	2-10	30-40
Nevada bluegrass	PONE3	2-5	---	X	---	2-5	2-5
Sandberg bluegrass	POSE	---	2-8	---	---	---	---
Thurber needlegrass	STTH2	---	15-30	---	10-20	---	---
Webber needlegrass	STWE	---	2-8	---	---	---	---
basin wildrye	ELCI2	2-10	---	---	2-8	---	2-10
bluebunch wheatgrass	AGSP	15-30	20-40	---	20-35	2-5	15-30
bluegrass	POA++	---	---	---	2-10	---	---
mountain brome	BRCA5	---	---	X	---	5-15	---
sedge	CAREX	---	---	X	---	---	---
slender wheatgrass	AGTR	---	---	X	---	5-15	---
spike-fescue	LEKI2	---	---	---	---	2-10	---
arrowleaf balsamroot	BASA3	2-5	---	---	---	---	2-5
groundsel	SENEC	---	---	X	---	---	---
tapertip hawksbeard	CRAC2	2-5	---	---	---	---	2-5
yarrow	ACHIL	---	---	X	---	---	---
Utah serviceberry	AMUT	---	---	---	---	1-5	---
Woods rose	ROWO	---	---	X	---	---	---
antelope bitterbrush	PUTR2	5-10	---	---	2-8	1-5	5-10
big sagebrush	ARTR2	---	---	---	10-20	---	---
common chokecherry	PRVI	---	---	---	---	1-5	---
mountain big sagebrush	ARVA2	10-20	---	---	---	5-15	10-20
sagebrush	ARTEM	---	20-30	---	---	---	---
snowberry	SYMPH	---	---	---	---	2-15	---
quaking aspen	POTRT	---	---	X	---	---	---
Range site number		025XY012NV	025XY018NV	025XY064NV	025XY014NV	025XY004NV	025XY012NV
Potential production (lb/acre):							
Favorable years		1400	800	1600	1000	2800	1400
Normal years		1000	600	1300	800	1800	1000
Unfavorable years		700	400	1000	600	1200	700

1731--MCIVEY-CHEN-DONNA ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		MCIVEY	CHEN	DONNA	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	30-40	30-50	---	X	15-30	2-5	---
Indian ricegrass	ORHY	---	---	---	---	---	---	2-5
Nevada bluegrass	PONE3	2-5	---	---	X	---	2-5	---
Sandberg bluegrass	POSE	---	---	2-8	---	---	---	---
Thurber needlegrass	STH2	---	---	15-30	---	2-5	2-8	10-20
Webber needlegrass	STWE	---	---	2-8	---	---	---	---
basin wildrye	ELCI2	2-10	---	---	---	---	5-10	---
bluebunch wheatgrass	AGSP	15-30	15-30	20-40	---	10-20	50-60	20-35
bluegrass	POA++	---	2-10	---	---	---	---	---
mountain brome	BRCA5	---	---	---	X	---	---	---
sedge	CAREX	---	---	---	X	---	---	---
slender wheatgrass	AGTR	---	---	---	X	---	---	---
arrowleaf balsamroot	BASA3	2-5	---	---	---	---	---	---
groundsel	SENEC	---	---	---	X	---	---	---
tapertip hawksbeard	CRAC2	2-5	---	---	---	---	---	---
yarrow	ACHIL	---	---	---	X	---	---	---
Woods rose	ROWO	---	---	---	X	---	---	---
antelope bitterbrush	PUTR2	5-10	2-5	---	---	20-40	2-10	---
black sagebrush	ARARN	---	---	---	---	---	---	25-35
low sagebrush	ARAR8	---	15-25	---	---	---	---	---
mountain big sagebrush	ARVA2	10-20	---	---	---	5-10	5-15	---
sagebrush	ARTEM	---	---	20-30	---	---	---	---
quaking aspen	POTRT	---	---	---	X	---	---	---
Range site number		025XY012NV	025XY017NV	025XY018NV	025XY064NV	025XY007NV	025XY009NV	024XY031NV
Potential production (lb/acre):								
Favorable years		1400	900	800	1600	2300	1300	700
Normal years		1000	700	600	1300	1400	900	500
Unfavorable years		700	400	400	1000	900	700	300

1732--MCIVEY-STAMPEDE-HEECHEE ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		MCIVEY	STAMPEDE	HEECHEE	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	30-40	---	15-30	15-30	30-40	---	---
Nevada bluegrass	POME3	2-5	---	---	---	2-5	5-10	---
Thurber needlegrass	STHE2	---	10-20	2-5	2-5	---	---	10-20
basin wildrye	ELCI2	2-10	2-8	---	---	2-10	60-70	2-8
bluebunch wheatgrass	AGSP	15-30	20-35	10-20	10-20	15-30	---	20-35
bluegrass	POA++	---	2-10	---	---	---	---	2-10
mat muhly	MURI	---	---	---	---	---	2-8	---
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8	---
arrowleaf balsamroot	BASA3	2-5	---	---	---	2-5	---	---
tapertip hawksbeard	CRAC2	2-5	---	---	---	2-5	---	---
antelope bitterbrush	PUTR2	5-10	2-8	20-40	20-40	5-10	---	2-8
basin big sagebrush	ARTR2	---	---	---	---	---	5-10	---
big sagebrush	ARTR2	---	10-20	---	---	---	---	10-20
mountain big sagebrush	ARVA2	10-20	---	5-10	5-10	10-20	---	---
Range site number		025XY012NV	025XY014NV	025XY007NV	025XY007NV	025XY012NV	025XY003NV	025XY014NV
Potential production (lb/acre):								
Favorable years		1400	1000	2300	2300	1400	4500	1000
Normal years		1000	800	1400	1400	1000	3500	800
Unfavorable years		700	600	900	900	700	2000	600

1740--SLIPBACK-WELCH ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or inclusion number--					
		SLIPBACK	WELCH	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Indian ricegrass	ORRY	2-10	---	---	---	---	2-10
alkali sacaton	SPAI	---	20-30	5-15	15-40	20-30	---
basin wildrye	ELCI2	10-20	2-5	2-8	40-60	2-5	10-20
bluegrass	POA++	---	---	25-50	---	---	---
inland saltgrass	DISPS2	---	---	---	2-5	---	---
mat muhly	MURI	---	30-40	30-40	---	30-40	---
rush	JuncU	---	5-10	---	---	5-10	---
western wheatgrass	AGSM	---	---	2-8	2-5	---	---
aster	ASTER	---	2-5	---	---	2-5	---
Douglas rabbitbrush	CHVI8	---	1-5	---	---	1-5	---
basin big sagebrush	ARTRT	---	2-5	---	---	2-5	---
big sagebrush	ARTR2	20-30	---	---	---	---	20-30
black greasewood	SAVE4	30-40	1-5	---	5-15	1-5	30-40
rubber rabbitbrush	CHNA2	2-5	5-10	---	2-5	5-10	2-5
Range site number		028BY028NV	028BY031NV	028BY100NV	028BY004NV	028BY031NV	028BY028NV
Potential production (lb/acre):							
Favorable years		800	1200	1500	2200	1200	800
Normal years		600	1000	1100	1500	1000	600
Unfavorable years		400	400	700	800	400	400

1741--SLIPBACK-SHANTOWN-TOBA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		SLIPBACK	SHANTOWN	TOBA	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	2-10	2-5	---	---	2-10	---
Thurber needlegrass	STTH2	---	30-40	---	---	---	---
alkali sacaton	SPAI	---	---	20-30	5-15	---	15-40
basin wildrye	ELCI2	10-20	---	2-5	2-8	10-20	40-60
bluebunch wheatgrass	AGSP	---	15-30	---	---	---	---
bluegrass	POA++	---	2-8	---	25-50	---	---
inland saltgrass	DISPS2	---	---	---	---	---	2-5
mat muhly	MURI	---	---	30-40	30-40	---	---
needleandthread	STCO4	---	2-8	---	---	---	---
rush	JunCU	---	---	5-10	---	---	---
western wheatgrass	AGSM	---	---	---	2-8	---	2-5
arrowleaf balsamroot	BASA3	---	2-5	---	---	---	---
aster	ASTER	---	---	2-5	---	---	---
tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---
Douglas rabbitbrush	CHVI8	---	---	1-5	---	---	---
antelope bitterbrush	POTR2	---	2-10	---	---	---	---
basin big sagebrush	ARTRT	---	---	2-5	---	---	---
big sagebrush	ARTR2	20-30	15-25	---	---	20-30	---
black greasewood	SAVE4	30-40	---	1-5	---	30-40	5-15
rubber rabbitbrush	CHNA2	2-5	---	5-10	---	2-5	2-5
Range site number		028BY028NV	028BY007NV	028BY031NV	028BY100NV	028BY028NV	028BY004NV
Potential production (lb/acre):							
Favorable years		800	1000	1200	1500	800	2200
Normal years		600	800	1000	1100	600	1500
Unfavorable years		400	600	400	700	400	800

1750--HEECHEE-WELCH ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		HEECHEE	WELCH	WELCH	Inclusion 1	Inclusion 2	Inclusion 3
Idaho fescue	FEID	30-40	---	---	30-40	---	---
Nevada bluegrass	PONE3	2-5	---	5-10	2-5	---	---
alkali sacaton	SPAI	---	5-15	---	---	5-15	---
basin wildrye	ELCI2	2-10	2-8	60-70	2-10	2-8	2-5
bluebunch wheatgrass	AGSP	15-30	---	---	15-30	---	---
bluegrass	POA++	---	25-50	---	---	25-50	25-40
mat muhly	MURI	---	30-40	2-8	---	30-40	2-5
rush	JunCU	---	---	---	---	---	5-15
sedge	CAREX	---	---	---	---	---	20-30
streambank wheatgrass	AGDAR	---	---	2-8	---	---	---
western wheatgrass	AGSM	---	2-8	---	---	2-8	---
arrowleaf balsamroot	BASA3	2-5	---	---	2-5	---	---
cinquefoil	POTEN	---	---	---	---	---	2-5
groundsel	SENEC	---	---	---	---	---	2-5
tapertip hawkbeard	CRAC2	2-5	---	---	2-5	---	---
antelope bitterbrush	PUTR2	5-10	---	---	5-10	---	---
basin big sagebrush	ARTRT	---	---	5-10	---	---	---
mountain big sagebrush	ARVA2	10-20	---	---	10-20	---	---
Range site number		025XY012NV	028BY100NV	025XY003NV	025XY012NV	028BY100NV	028BY001NV
Potential production (lb/acre):							
Favorable years		1400	1500	4500	1400	1500	4000
Normal years		1000	1100	3500	1000	1100	2000
Unfavorable years		700	700	2000	700	700	1200

1760--LYKAL-WENDANE-JAMES CANYON ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		LYKAL	WENDANE	JAMES CANYON	Inclusion 1	Inclusion 2
Baltic rush	JUBA	---	2-8	---	---	---
Letterman needlegrass	STLE4	X	---	---	---	---
alkali cordgrass	SPGR	---	10-15	---	---	---
alkali sacaton	SPAI	---	40-50	5-15	5-15	15-40
alkaligrass	PUCCI	---	2-5	---	---	---
basin wildrye	ELCI2	---	---	2-8	2-8	40-60
bluebunch wheatgrass	AGSP	X	---	---	---	---
bluegrass	POA++	---	2-8	25-50	25-50	---
inland saltgrass	DISPS2	---	2-5	---	---	2-5
mat muhly	MURI	---	---	30-40	30-40	---
muttongrass	POPE	X	---	---	---	---
sedge	CAREX	X	5-10	---	---	---
spike-fescue	LEKI2	X	---	---	---	---
western wheatgrass	AGSM	---	---	2-8	2-8	2-5
creeping barberry	BERE	X	---	---	---	---
goldenweed	HAPLO2	X	---	---	---	---
black greasewood	SAVE4	---	---	---	---	5-15
common juniper	JUCO6	X	---	---	---	---
mountain big sagebrush	ARVA2	X	---	---	---	---
rubber rabbitbrush	CHNA2	---	---	---	---	2-5
serviceberry	AMELA	X	---	---	---	---
bristlecone pine	PIAR	X	---	---	---	---
limber pine	PIPL2	X	---	---	---	---
white fir	ABCO	X	---	---	---	---
Range site number		028BY063NV	028BY002NV	028BY100NV	028BY100NV	028BY004NV
Potential production (lb/acre):						
Favorable years		800	1500	1500	1500	2200
Normal years		500	1000	1100	1100	1500
Unfavorable years		300	700	700	700	800

1770--DONNA-MCIVEY-BEECHER ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		DONNA	MCIVEY	BEECHER	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	---	30-40	15-30	30-50	---	---	X
Nevada bluegrass	PONE3	---	2-5	---	---	40-60	5-10	X
Sandberg bluegrass	POSE	2-8	---	---	---	---	---	---
Thurber needlegrass	STTH2	15-30	---	2-5	---	---	---	---
Webber needlegrass	STWE	2-8	---	---	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	20-40	---	---
basin wildrye	ELCI2	---	2-10	---	---	2-8	60-70	---
bluebunch wheatgrass	AGSP	20-40	15-30	10-20	15-30	---	---	---
bluegrass	POA++	---	---	---	2-10	---	---	---
mat muhly	MURI	---	---	---	---	2-8	2-8	---
meadow barley	HOBR2	---	---	---	---	2-5	---	---
mountain brome	BRCA5	---	---	---	---	---	---	X
sedge	CAREX	---	---	---	---	2-8	---	X
slender wheatgrass	AGTR	---	---	---	---	---	---	X
streambank wheatgrass	AGDAR	---	---	---	---	---	2-8	---
arrowleaf balsamroot	BASA3	---	2-5	---	---	---	---	---
groundsel	SENEC	---	---	---	---	---	---	X
tapertip hawksbeard	CRAC2	---	2-5	---	---	---	---	---
yarrow	ACHIL	---	---	---	---	---	---	X
Woods rose	ROWO	---	---	---	---	---	---	X
antelope bitterbrush	PUTR2	---	5-10	20-40	2-5	---	---	---
basin big sagebrush	ARTRT	---	---	---	---	---	5-10	---
low sagebrush	ARAR8	---	---	---	15-25	---	---	---
mountain big sagebrush	ARVA2	---	10-20	5-10	---	---	---	---
sagebrush	ARTEM	20-30	---	---	---	---	---	---
quaking aspen	POTRT	---	---	---	---	---	---	X
Range site number		025XY018NV	025XY012NV	025XY007NV	025XY017NV	025XY006NV	025XY003NV	025XY064NV
Potential production (lb/acre):								
Favorable years		800	1400	2300	900	2000	4500	1600
Normal years		600	1000	1400	700	1300	3500	1300
Unfavorable years		400	700	900	400	800	2000	1000

1780--SCHOER-WELCH ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or inclusion number--					
		SCHOER	WELCH	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	FEID	---	---	---	15-30	---	---
Nevada bluegrass	PONE3	---	---	---	---	5-10	---
Sandberg bluegrass	POSE	---	---	2-8	---	---	---
Thurber needlegrass	STTH2	10-20	---	15-30	2-5	---	10-20
Webber needlegrass	STWE	---	---	2-8	---	---	---
alkali sacaton	SPAI	---	5-15	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	5-10	---
basin wildrye	ELCI2	2-8	2-8	---	---	---	2-8
bluebunch wheatgrass	AGSP	20-35	---	20-40	10-20	---	20-35
bluegrass	POA++	2-10	25-50	---	---	---	2-10
mat muhly	MURI	---	30-40	---	---	---	---
sedge	CAREX	---	---	---	---	5-10	---
tufted hairgrass	DecE	---	---	---	---	30-60	---
western wheatgrass	AGSM	---	2-8	---	---	---	---
Sierra clover	TRWO	---	---	---	---	2-5	---
cinquefoil	POTEN	---	---	---	---	2-5	---
antelope bitterbrush	PUTR2	2-8	---	---	20-40	---	2-8
big sagebrush	ARTR2	10-20	---	---	---	---	10-20
mountain big sagebrush	ARVA2	---	---	---	5-10	---	---
sagebrush	ARTEM	---	---	20-30	---	---	---
Range site number		025XY014NV	028BY100NV	025XY018NV	025XY007NV	025XY005NV	025XY014NV
Potential production (lb/acre):							
Favorable years		1000	1500	800	2300	3000	1000
Normal years		800	1100	600	1400	1700	800
Unfavorable years		600	700	400	900	1000	600

1790--DONNA-KRENKA-MCIVEY ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		DONNA	KRENKA	MCIVEY	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	2-5	---	---	---	---	---
Idaho fescue	FEID	---	2-10	5-15	30-40	X	2-5	---
Nevada bluegrass	PONE3	---	2-5	---	2-5	X	2-5	40-60
Sandberg bluegrass	POSE	2-8	---	---	---	---	---	---
Thurber needlegrass	STTH2	15-30	---	---	---	---	2-8	---
Webber needlegrass	STWE	2-8	---	---	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	---	20-40
basin wildrye	ELCI2	---	---	---	2-10	---	5-10	2-8
bluebunch wheatgrass	AGSP	20-40	2-5	2-10	15-30	---	50-60	---
mat muhly	MURI	---	---	---	---	---	---	2-8
meadow barley	HOBR2	---	---	---	---	---	---	2-5
mountain brome	BRCA5	---	5-15	---	---	X	---	---
sedge	CAREX	---	---	---	---	X	---	2-8
slender wheatgrass	AGTR	---	5-15	---	---	X	---	---
spike-fescue	LEKI2	---	2-10	---	---	---	---	---
arrowleaf balsamroot	BASA3	---	---	---	2-5	---	---	---
groundsel	SENEC	---	---	---	---	X	---	---
tapertip hawkbeard	CRAC2	---	---	---	2-5	---	---	---
yarrow	ACHIL	---	---	---	---	X	---	---
Utah serviceberry	AMUT	---	1-5	---	---	---	---	---
Woods rose	ROWO	---	---	---	---	X	---	---
antelope bitterbrush	POTR2	---	1-5	2-8	5-10	---	2-10	---
common chokecherry	PRVI	---	1-5	---	---	---	---	---
mountain big sagebrush	ARVA2	---	5-15	2-5	10-20	---	5-15	---
sagebrush	ARTEM	20-30	---	---	---	---	---	---
serviceberry	AMELA	---	---	40-50	---	---	---	---
snowberry	SYMPH	---	2-15	2-8	---	---	---	---
quaking aspen	POTRT	---	---	---	---	X	---	---
Range site number		025XY018NV	025XY004NV	025XY046NV	025XY012NV	025XY064NV	025XY009NV	025XY006NV
Potential production (lb/acre):								
Favorable years		800	2800	1800	1400	1600	1300	2000
Normal years		600	1800	1300	1000	1300	900	1300
Unfavorable years		400	1200	900	700	1000	700	800

1800--CHEN-GRALEY-ROCK OUTCROP ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		CHEN	GRALEY	ROCK OUTCROP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Idaho fescue	PHID	30-50	30-40	---	---	5-30	2-5	---
Indian ricegrass	ORHY	---	---	---	5-15	---	---	---
Nevada bluegrass	PONE3	---	2-5	---	---	---	2-5	5-15
Thurber needlegrass	STH2	---	---	---	15-30	---	2-8	---
basin wildrye	ELCI2	---	2-10	---	---	---	5-10	---
bluebunch wheatgrass	AGSP	15-30	15-30	---	---	---	50-60	---
bluegrass	POA++	2-10	---	---	---	5-15	---	---
inland saltgrass	DISPS2	---	---	---	---	---	---	2-5
mat muhly	MURI	---	---	---	---	---	---	2-5
sedge	CAREX	---	---	---	---	---	---	2-10
wildrye	ELYMU	---	---	---	---	---	---	60-80
arrowleaf balsamroot	BASA3	---	2-5	---	---	---	---	---
globemallow	SPBAE	---	---	---	2-5	---	---	---
goldenweed	HAPLO2	---	---	---	---	2-5	---	---
tapertip hawkbeard	CRAC2	---	2-5	---	---	---	---	---
antelope bitterbrush	PUTR2	2-5	5-10	---	---	---	2-10	---
black sagebrush	ARARN	---	---	---	25-35	---	---	---
low sagebrush	ARAR8	15-25	---	---	---	---	---	---
mountain big sagebrush	ARVA2	---	10-20	---	---	---	5-15	---
sagebrush	ARTEM	---	---	---	---	30-35	---	---
willow	SALIX	---	---	---	---	---	---	5-10
Range site number		025XY017NV	025XY012NV	None	024XY030NV	025XY024NV	025XY009NV	025XY001NV
Potential production (lb/acre):								
Favorable years		900	1400		500	400	1300	3500
Normal years		700	1000		350	275	900	2500
Unfavorable years		400	700		250	150	700	1800

1810--SOMINE-TUSEL-HAPGOOD ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		SUMINE	TUSEL	HAPGOOD	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	2-5	---	---	---	---
Cusick bluegrass	POCU3	---	5-10	---	---	---	---	---
Idaho fescue	FEID	2-5	50-65	2-10	5-30	30-50	---	2-10
Letterman needlegrass	STLE4	---	---	---	---	---	---	2-5
Nevada bluegrass	PONE3	2-5	---	2-5	---	---	5-10	2-5
Thurber needlegrass	STTH2	2-8	---	---	---	---	---	---
alpine timothy	PHAL2	---	---	---	---	---	5-10	---
basin wildrye	ELCI2	5-10	---	---	---	---	---	5-15
bluebunch wheatgrass	AGSP	50-60	2-5	2-5	---	15-30	---	30-50
bluegrass	POA++	---	---	---	5-15	2-10	---	---
mountain brome	BRCA5	---	---	5-15	---	---	---	20-40
sedge	CAREX	---	---	---	---	---	5-10	---
slender wheatgrass	AGTR	---	---	5-15	---	---	---	---
spike-fescue	LEKI2	---	---	2-10	---	---	---	2-5
tufted hairgrass	DecE	---	---	---	---	---	30-60	---
Sierra clover	TRWO	---	---	---	---	---	2-5	---
cinqufoil	POTEN	---	---	---	---	---	2-5	---
goldenweed	HAPLO2	---	---	---	2-5	---	---	---
Utah serviceberry	AMUT	---	---	1-5	---	---	---	---
antelope bitterbrush	PUTR2	2-10	---	1-5	---	2-5	---	5-10
common chokecherry	PRVI	---	---	1-5	---	---	---	---
low sagebrush	ARAR8	---	---	---	---	15-25	---	---
mountain big sagebrush	ARVA2	5-15	2-8	5-15	---	---	---	5-15
sagebrush	ARTEM	---	---	---	30-35	---	---	---
snowberry	SYMPH	---	---	2-15	---	---	---	---
Range site number		025XY009NV	025XY010NV	025XY004NV	025XY024NV	025XY017NV	025XY005NV	025XY016NV
Potential production (lb/acre):								
Favorable years		1300	1200	2800	400	900	3000	2000
Normal years		900	800	1800	275	700	1700	1400
Unfavorable years		700	600	1200	150	400	1000	1000

1820--HUSSA-HALLECK-WELSUM ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		HUSSA	HALLECK	WELSUM	Inclusion 1	Inclusion 2	Inclusion 3
Nevada bluegrass	PONE3	5-10	5-10	5-10	---	---	---
Thurber needlegrass	STTH2	---	---	---	10-20	---	---
alkali sacaton	SPAI	---	---	---	---	5-25	---
alpine timothy	PHAL2	5-10	5-10	5-10	---	---	---
basin wildrye	ELCI2	---	---	---	2-8	50-60	---
bluebunch wheatgrass	AGSP	---	---	---	20-35	---	---
bluegrass	POA++	---	---	---	2-10	---	X
rush	JunCU	---	---	---	---	---	X
sedge	CAREX	5-10	5-10	5-10	---	---	X
streambank wheatgrass	AGDAR	---	---	---	---	---	X
tufted hairgrass	DecE	30-60	30-60	30-60	---	---	---
western wheatgrass	AGSM	---	---	---	---	---	X
Sierra clover	TRWO	2-5	2-5	2-5	---	---	---
cinquefoil	POTEN	2-5	2-5	2-5	---	---	---
clover	TRIFO	---	---	---	---	---	X
yarrow	ACHIL	---	---	---	---	---	X
Woods rose	ROWO	---	---	---	---	---	X
antelope bitterbrush	PUTR2	---	---	---	2-8	---	---
big sagebrush	ARTR2	---	---	---	10-20	---	---
black greasewood	SAVE4	---	---	---	---	5-15	---
currant	RIBES	---	---	---	---	---	X
rubber rabbitbrush	CHNA2	---	---	---	---	2-5	---
narrowleaf cottonwood	POAN3	---	---	---	---	---	X
willow	SALIX	---	---	---	---	---	X
Range site number		025XY005NV	025XY005NV	025XY005NV	025XY014NV	024XY007NV	025XY053NV
Potential production (lb/acre):							
Favorable years		3000	3000	3000	1000	1900	2500
Normal years		1700	1700	1700	800	1400	2000
Unfavorable years		1000	1000	1000	600	800	1000

1831--ENKO-KELK ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		ENKO	KELK	ENKO	Inclusion 1	Inclusion 2	Inclusion 3
Indian ricegrass	ORHY	---	---	---	15-30	---	---
Sandberg bluegrass	POSE	2-5	2-5	2-5	---	2-5	2-5
Thurber needlegrass	STTH2	15-25	15-25	15-25	---	15-25	15-25
basin wildrye	ELCI2	---	---	---	2-8	---	---
bluebunch wheatgrass	AGSP	25-40	25-40	25-40	---	25-40	25-40
bottlebrush squirreltail	SIHY	---	---	---	5-10	---	---
Wyoming big sagebrush	ARTRW	15-25	15-25	15-25	15-30	15-25	15-25
antelope bitterbrush	PUTR2	---	---	---	2-8	---	---
black sagebrush	ARARN	---	---	---	10-20	---	---
spiny hopsage	GRSP	---	---	---	2-5	---	---
Range site number		025XY019NV	025XY019NV	025XY019NV	025XY025NV	025XY019NV	025XY019NV
Potential production (lb/acre):							
Favorable years		800	800	800	500	800	800
Normal years		600	600	600	350	600	600
Unfavorable years		400	400	400	200	400	400

1840--AMENE-BELSAC-CHEN ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		AMENE	BELSAC	CHEN	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	2-5	---	---	---	---	---
Idaho fescue	FEID	5-15	2-10	30-50	---	5-30	---	X
Nevada bluegrass	PONE3	---	2-5	---	---	---	5-10	X
alpine timothy	PHAL2	---	---	---	---	---	5-10	---
bluebunch wheatgrass	AGSP	2-10	2-5	15-30	20-30	---	---	---
bluegrass	POA++	---	---	2-10	---	5-15	---	---
mountain brome	BRCA5	---	5-15	---	---	---	---	X
muttongrass	POPS	---	---	---	2-8	---	---	---
needlegrass	STIPA	---	---	---	5-15	---	---	---
sedge	CAREX	---	---	---	---	---	5-10	X
slender wheatgrass	AGTR	---	5-15	---	---	---	---	X
spike-fescue	LEKI2	---	2-10	---	---	---	---	---
tufted hairgrass	DecE	---	---	---	---	---	30-60	---
Sierra clover	TRWO	---	---	---	---	---	2-5	---
cinquefoil	POTEN	---	---	---	---	---	2-5	---
goldenweed	HAPLO2	---	---	---	---	2-5	---	---
groundsel	SENEC	---	---	---	---	---	---	X
yarrow	ACHIL	---	---	---	---	---	---	X
Utah serviceberry	AMUT	---	1-5	---	---	---	---	---
Woods rose	ROWO	---	---	---	---	---	---	X
antelope bitterbrush	PUTR2	2-8	1-5	2-5	---	---	---	---
common chokecherry	PRVI	---	1-5	---	---	---	---	---
low sagebrush	ARAR8	---	---	15-25	---	---	---	---
mountain big sagebrush	ARVA2	2-5	5-15	---	15-25	---	---	---
sagebrush	ARTEM	---	---	---	---	30-35	---	---
serviceberry	AMELA	40-50	---	---	---	---	---	---
snowberry	SYMPH	2-8	2-15	---	2-8	---	---	---
curleaf mountainmahogany	CELE3	---	---	---	15-25	---	---	---
quaking aspen	POTRT	---	---	---	---	---	---	X
Range site number		025XY046NV	025XY004NV	025XY017NV	028BY043NV	025XY024NV	025XY005NV	025XY064NV
Potential production (lb/acre):								
Favorable years		1800	2800	900	1700	400	3000	1600
Normal years		1300	1800	700	1300	275	1700	1300
Unfavorable years		900	1200	400	900	150	1000	1000

1850--BULLUMP-CLEAVAGE-ROCK OUTCROP ASSOCIATION

(An X indicates that the named plant is in the potential native woodland understory and the percentage is highly variable.
Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions						
		Soil name or Inclusion number--						
		BULLUMP	CLEAVAGE	ROCK OUTCROP	Inclusion 1	Inclusion 2	Inclusion 3	Inclusion 4
Columbia needlegrass	STNE3	---	---	---	---	2-5	---	---
Idaho fescue	FEID	2-10	5-30	---	X	2-10	2-5	15-25
Letterman needlegrass	STLE4	2-5	---	---	---	---	---	---
Nevada bluegrass	PONE3	2-5	---	---	---	2-5	2-5	---
Thurber needlegrass	STTH2	---	---	---	---	---	2-8	---
basin wildrye	ELCI2	5-15	---	---	---	---	5-10	---
bluebunch wheatgrass	AGSP	30-50	---	---	---	2-5	50-60	5-15
bluegrass	POA++	---	5-15	---	---	---	---	2-5
horsemint giant hyssop	AGUR	---	---	---	X	---	---	---
mountain brome	BRCA5	20-40	---	---	X	5-15	---	---
needlegrass	STIPA	---	---	---	---	---	---	2-8
slender wheatgrass	AGTR	---	---	---	X	5-15	---	---
spike-fescue	LEKI2	2-5	---	---	---	2-10	---	---
goldenweed	HAPLO2	---	2-5	---	---	---	---	---
groundsel	SENEC	---	---	---	X	---	---	---
Utah serviceberry	AMUT	---	---	---	X	1-5	---	---
antelope bitterbrush	PUTR2	5-10	---	---	---	1-5	2-10	2-5
common chokecherry	PRVI	---	---	---	---	1-5	---	---
mountain big sagebrush	ARVA2	5-15	---	---	---	5-15	5-15	5-15
sagebrush	ARTEM	---	30-35	---	---	---	---	---
snowberry	SYMPH	---	---	---	X	2-15	---	2-8
quaking aspen	POTRT	---	---	---	X	---	---	---
Range site number		025XY016NV	025XY024NV	None	025XY065NV	025XY004NV	025XY009NV	025XY071NV
Potential production (lb/acre):								
Favorable years		2000	400		800	2800	1300	1700
Normal years		1400	275		600	1800	900	1300
Unfavorable years		1000	150		400	1200	700	900

1861--EQUIS-DEVILSGAIT ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions				
		Soil name or Inclusion number--				
		EQUIS	DEVILSGAIT	Inclusion 1	Inclusion 2	Inclusion 3
Baltic rush	JUBA	2-5	---	---	---	---
alkali bluegrass	POJU	2-10	---	---	---	---
alkali muhly	MUAS	2-5	---	---	---	---
alkali sacaton	SPAI	2-10	---	---	15-40	---
basin wildrye	ELCI2	---	---	2-5	40-60	---
bluegrass	POA++	---	---	25-40	---	---
bulrush	SCIRP	---	30-50	---	---	---
cattail	TYPHA	---	20-40	---	---	---
giantreed	ARDO4	---	5-10	---	---	---
inland saltgrass	DISPS2	5-15	---	---	2-5	---
mat muhly	MURI	---	---	2-5	---	---
rush	JunCU	---	2-8	5-15	---	---
sedge	CAREX	10-20	2-8	20-30	---	---
western wheatgrass	AGSM	35-50	---	---	2-5	---
wildrye	ELYMU	5-15	---	---	---	---
cinquefoil	POTEN	---	---	2-5	---	---
groundsel	SENEC	---	---	2-5	---	---
black greasewood	SAVE4	---	---	---	5-15	---
rubber rabbitbrush	CHNA2	---	---	---	2-5	---
Range site number		028BY012NV	028BY044NV	028BY001NV	028BY004NV	None
Potential production (lb/acre):						
Favorable years		2000	4000	4000	2200	
Normal years		1500	2800	2000	1500	
Unfavorable years		1000	2000	1200	800	

1862--EQUIS-KOLDA ASSOCIATION

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions					
		Soil name or Inclusion number--					
		EQUIS	EQUIS	KOLDA	Inclusion 1	Inclusion 2	Inclusion 3
Baltic rush	JUBA	2-8	2-5	---	---	---	---
alkali bluegrass	POJU	---	2-10	---	---	---	---
alkali cordgrass	SPGR	10-15	---	---	---	---	---
alkali muhly	MUAS	---	2-5	---	---	---	---
alkali sacaton	SPAI	40-50	2-10	---	15-40	5-15	---
alkaligrass	PUCCI	2-5	---	---	---	---	---
basin wildrye	ELCY2	---	---	2-5	40-60	2-8	---
bluegrass	POA++	2-8	---	25-40	---	25-50	---
bulrush	SCIRP	---	---	---	---	---	30-50
cattail	TYPHA	---	---	---	---	---	20-40
giantreed	ARDO4	---	---	---	---	---	5-10
inland saltgrass	DISPS2	2-5	5-15	---	2-5	---	---
mat muhly	MURI	---	---	2-5	---	30-40	---
rush	JunCU	---	---	5-15	---	---	2-8
sedge	CAREE	5-10	10-20	20-30	---	---	2-8
western wheatgrass	AGSM	---	35-50	---	2-5	2-8	---
wildrye	ELYMU	---	5-15	---	---	---	---
cinquefoil	POTEN	---	---	2-5	---	---	---
groundsel	SENEC	---	---	2-5	---	---	---
black greasewood	SAVE4	---	---	---	5-15	---	---
rubber rabbitbrush	CHNA2	---	---	---	2-5	---	---
Range site number		028BY002NV	028BY012NV	028BY001NV	028BY004NV	028BY100NV	028BY044NV
Potential production (lb/acre):							
Favorable years		1500	2000	4000	2200	1500	4000
Normal years		1000	1500	2000	1500	1100	2800
Unfavorable years		700	1000	1200	800	700	2000

1870--DENIED ACCESS

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions
		Soil name or Inclusion number--
		DENIED ACCES

Range site number

None

Potential production (lb/acre):

Favorable years

Normal years

Unfavorable years

(Absence of an entry indicates that the named plant is not a key species in the potential native plant community)

Common plant name	Plant symbol	Percentage composition and production (dry weight) of plants on major soils and inclusions
		Soil name or Inclusion number--
		WATER

Potential production (lb/acre):
Favorable years
Normal years
Unfavorable years

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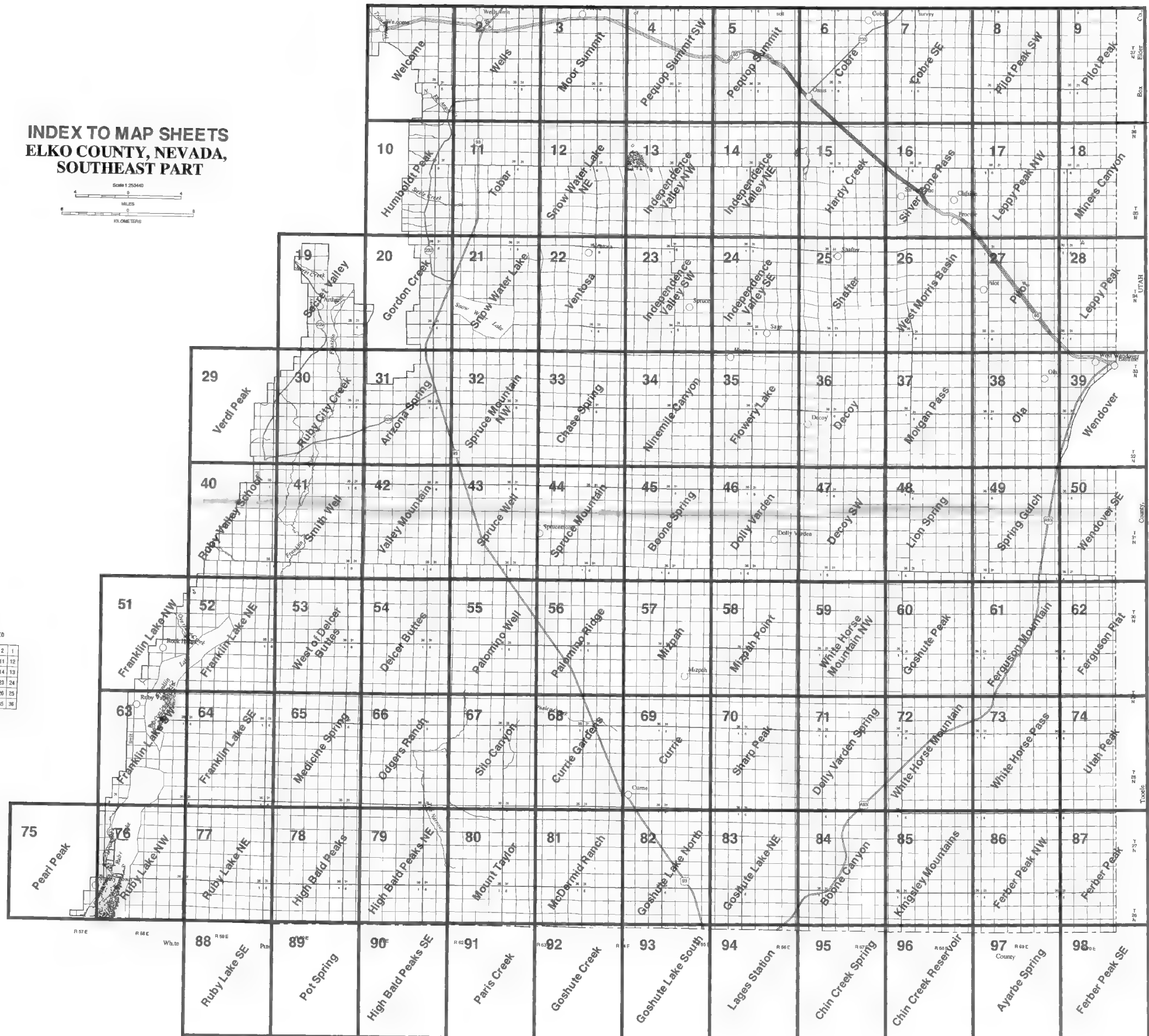


INDEX TO MAP SHEETS ELKO COUNTY, NEVADA, SOUTHEAST PART



SECTIONALIZED
TOWNSHIP

6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36



UTAH

UTAH

County

Township

County



This map was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid. 1000-meter (ft.) Universal Transverse Mercator (zone 11). Coordinates of dots and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

SCALE 1:24,000

0 1000 2000 3000 4000 5000 6000 7000

FEET

METERS

ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 1

(Join sheet 11)

WELCOME, NEVADA
15 MINUTE SERIES
SHEET NUMBER 1 OF 98

QUADRANGLE LOCATION

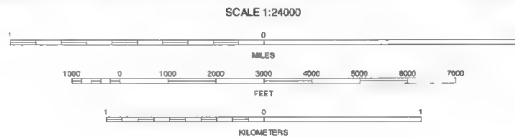
1 2 3 4 5 6 7 8

1. TABOR FLATS
2. METROPOLIS
3. CULLEY PEAK
4. HERDER CREEK
5. WELLS
6. TENT MOUNTAIN
7. HUMBOLDT PEAK
8. TIGER



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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks, Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTH-EAST PART NO. 2

QUADRANGLE LOCATION			
1	2	3	1 METROPOLIS
			2 OXLEY PEAK
			3 WELLS PEAK
			4 WELCOME
4		5	5 MOOR SUMMIT
			6 HUMBOLDT PEAK
	7	8	7 TOBAR
			8 SNOW WATER LAKE NE

INDEX TO ADJOINING 7.5 MAPS

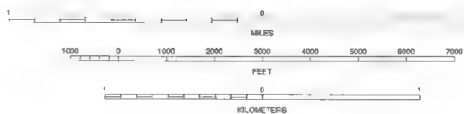
WELLS, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 2 OF 98



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks Universal Transverse Mercator zone 11 Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

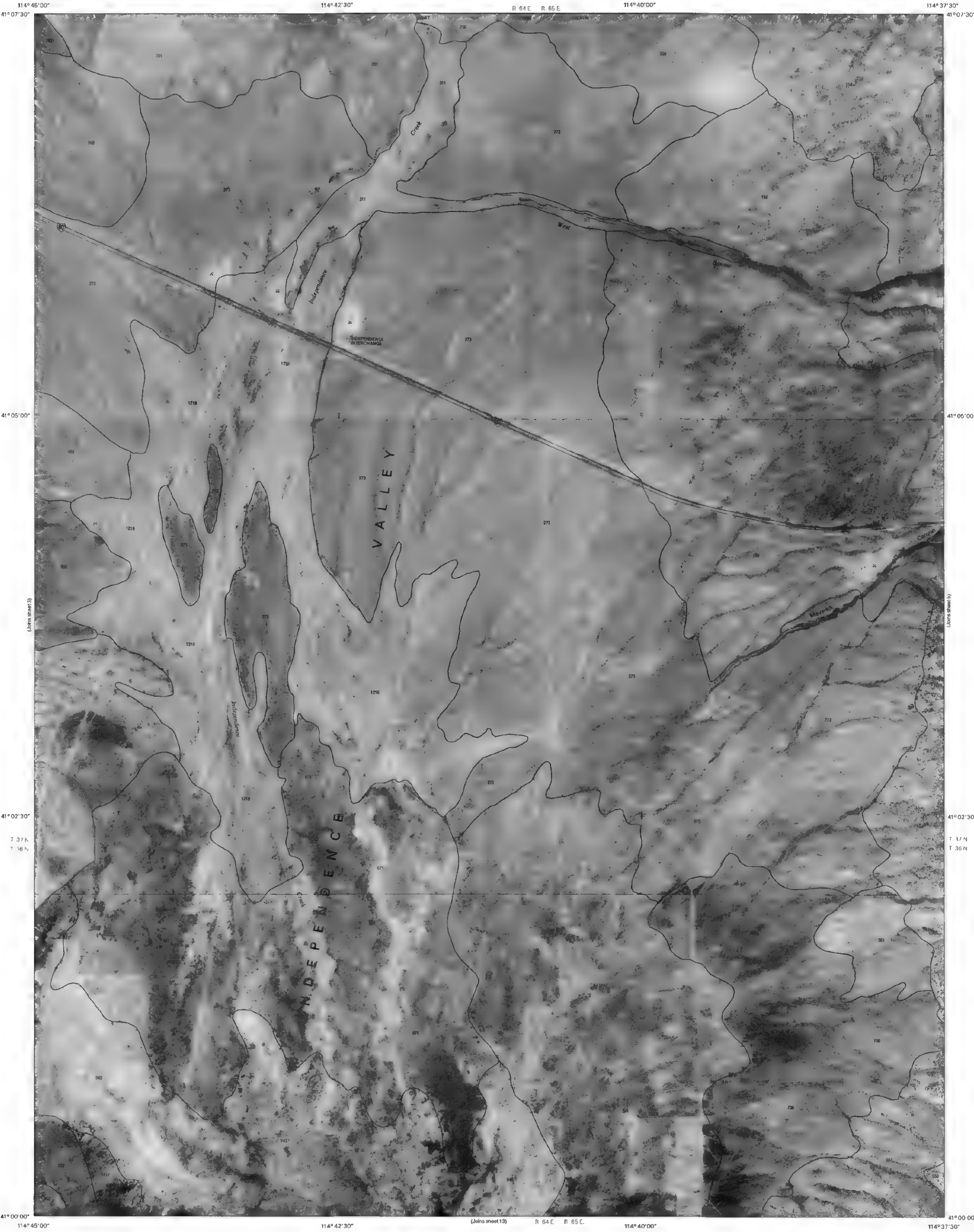
N 0° 0' 0"



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 3

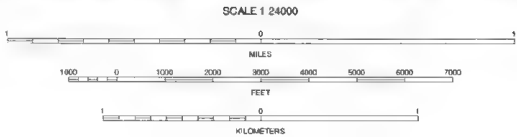
QUADRANGLE LOCATION							
1	2	3	4	5	6	7	8

MOOR SUMMIT, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 3 OF 98



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid. 1000-meter ticks. Universal Transverse Mercator, zone 11. Coordinates grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



PEQUOP SUMMIT SW, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 4 OF 98

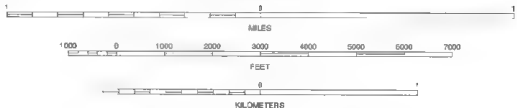
QUADRANGLE LOCATION			
1	2	3	1 WELLS PEAK
			2 HOLBORN
			3 PEQUOP
			4 MOOR SUMMIT
4		5	5 PEQUOP SUMMIT
			6 SNOW WATER LAKE NE
			7 INDEPENDENCE VALLEY NW
6	7	8	8 INDEPENDENCE VALLEY NE

INDEX TO ADJOINING 7.5 MAPS



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North American Datum of 1927 (NAD27). Clarke 1886 Spheroid. 1000-meter ticks. Universal Transverse Mercator zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA SOUTHEAST PART NO. 5



PEQUOP SUMMIT, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 5 OF 98

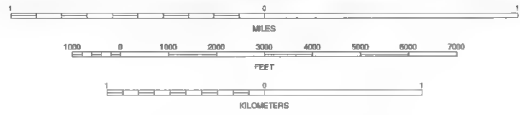
QUADRANGLE LOCATION			
1	2	3	1 HOLBORN
			2 PEQUOP
			3 VALLEY PASS
4		5	4 PEQUOP SUMMIT SW
			5 COBRE
			6 INDEPENDENCE VALLEY NW
6	7	8	7 INDEPENDENCE VALLEY NE
			8 HARDY CREEK

INDEX TO ADJOINING 7.5 MAPS



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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 11.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 6

QUADRANGLE LOCATION

1	2	3
4	5	6
7	8	9

INDEX TO ADJOINING 7.5-MINUTE MAPS

1. PECULOP
2. VALLEY PASS
3. LORAY
4. PECULOP SUMMIT
5. COBRE SE
6. INDEPENDENCE VALLEY NE
7. HARDY CREEK
8. SILVER ZONE PASS

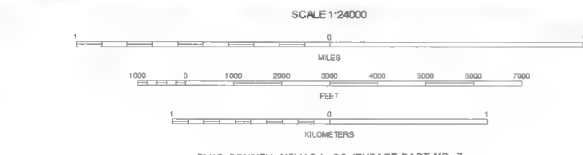
COBRE, NEVADA
7.5-MINUTE SERIES
SHEET NUMBER 6 OF 98



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27) Clarke 1866 Spheroid
1000-meter box: Universal Transverse Mercator, zone 11
Coordinate grid boxes and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

85078



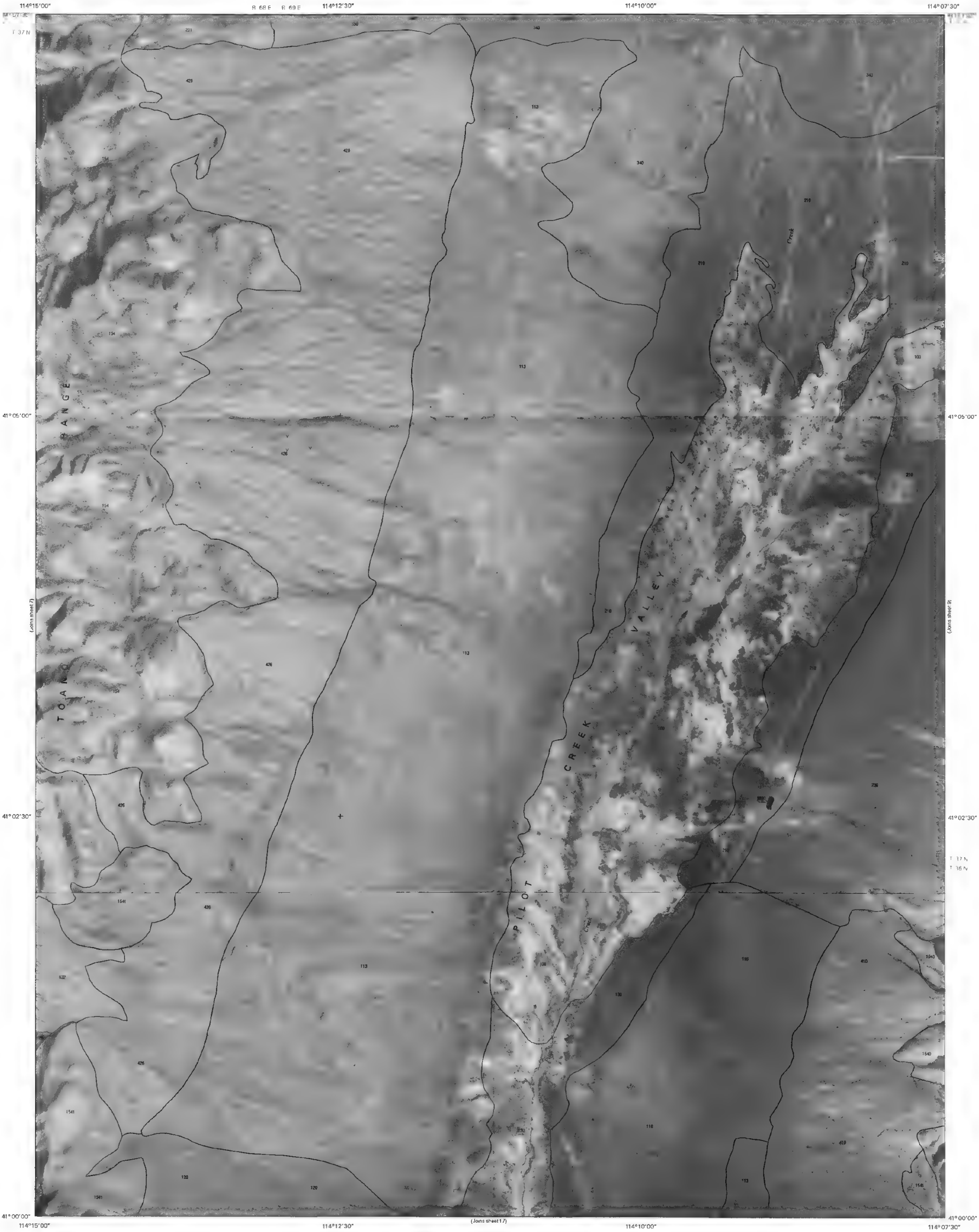
ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 7



COBRE SE, NEVADA
7 5 MINUTE SERIES
SHEET NUMBER 7 OF 98

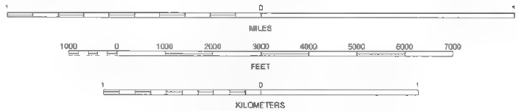
QUADRANGLE LOCATION			
1	2	3	1 VALLEY PASS
			2 LORAY
			3 PILOT PEAK NW
4	5	6	4 COBRE
			5 PILOT PEAK SW
			6 HARDY CREEK
5	7	8	7 SILVER ZONE PASS
			8 LIPPY PEAK NW

INDEX TO ADJOINING 7 5 MAPS



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27). Carke 1866 Scheroid 1000-meter boxes. Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



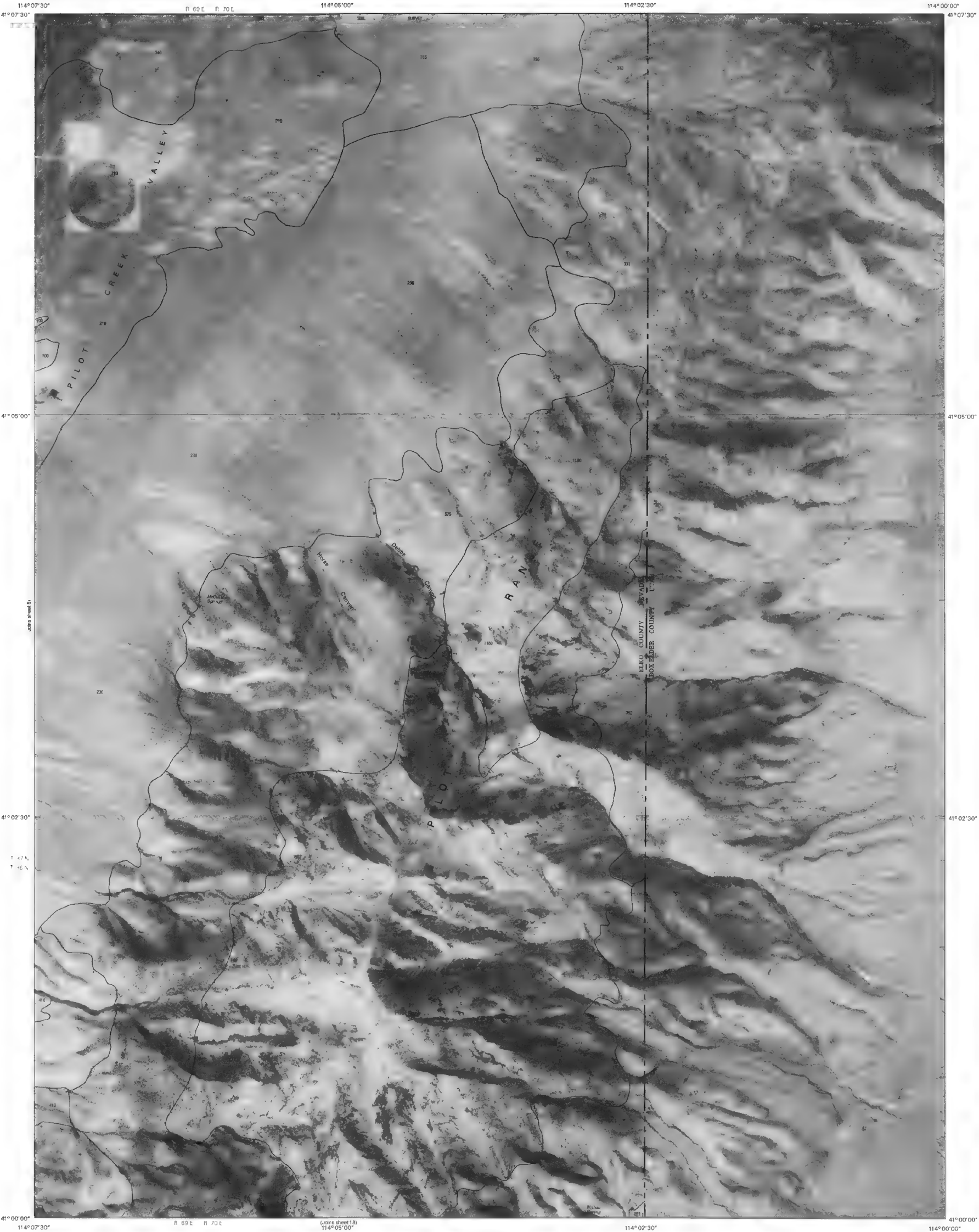
ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 8



PILOT PEAK SW, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 8 OF 98

QUADRANGLE LOCATION			
1	2	3	1. LORAY
			2. PILOT PEAK NW
			3. PATTERSON PASS
4		5	4. COURSE SE
			5. PILOT PEAK
			6. SILVER ZONE PASS
6	7	8	7. LEPPY PEAK NW
			8. MINERS CANYON

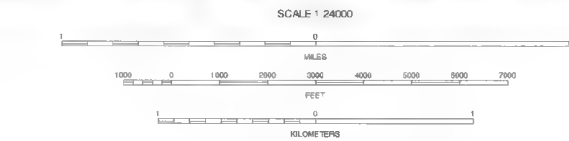
INDEX TO ADJOINING 7.5-MINUTE MAPS



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North American Datum of 1927 (NAD27) Clarke 1866 Spheroid 1000 meter ticks Universal Transverse Mercator zone 11 Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



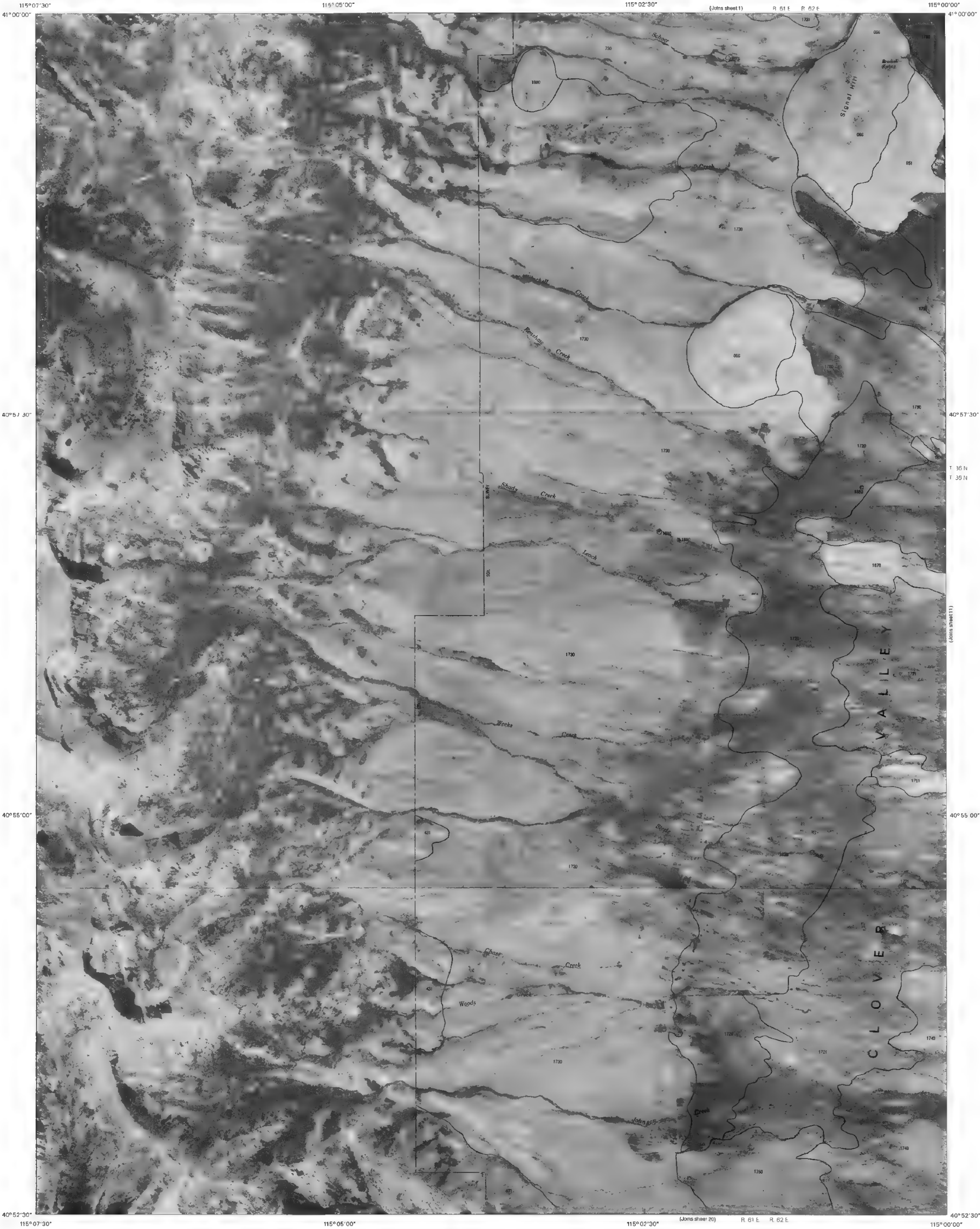
ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 9

QUADRANGLE LOCATION

1	2	3	1 PILOT PEAK NW
			2 PATTERSON PASS
			3 CRATER ISLAND NW
4		5	4 PILOT PEAK SW
			5 CRATER ISLAND SW
			6 JEFFY PEAK NW
5	7	8	7 MINERS CANYON
			8 SILVER ISLAND PASS

INDEX TO ADJOINING 7.5 MAPS

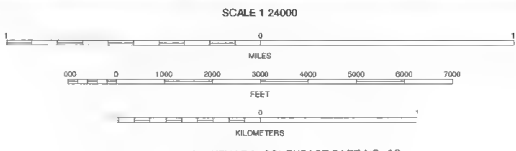
PILOT PEAK, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 9 OF 98



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North American Datum of 1927 (NAD27) Clarke 1866 Spheroid
1000 meter ticks: Universal Transverse Mercator, zone 11
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 10

QUADRANGLE LOCATION			
1	2	3	1. HERDER CREEK
4	5	6	2. WELCOME CREEK
7	8	9	3. WELLS CREEK
			4. TENT MOUNTAIN CREEK
			5. TORREY CREEK
			6. SECRET VALLEY CREEK
			7. GORDON CREEK
			8. SNOW WATER LAKE

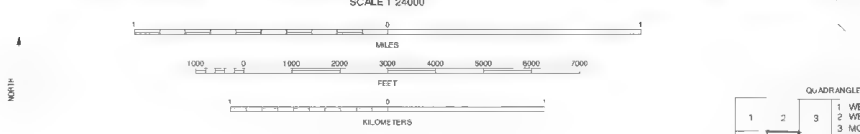
INDEX TO ADJOINING 7 1/2 MAPS

HUMBOLDT PEAK, NEVADA
7 1/2 MINUTE SERIES
SHEET NUMBER 10 OF 98

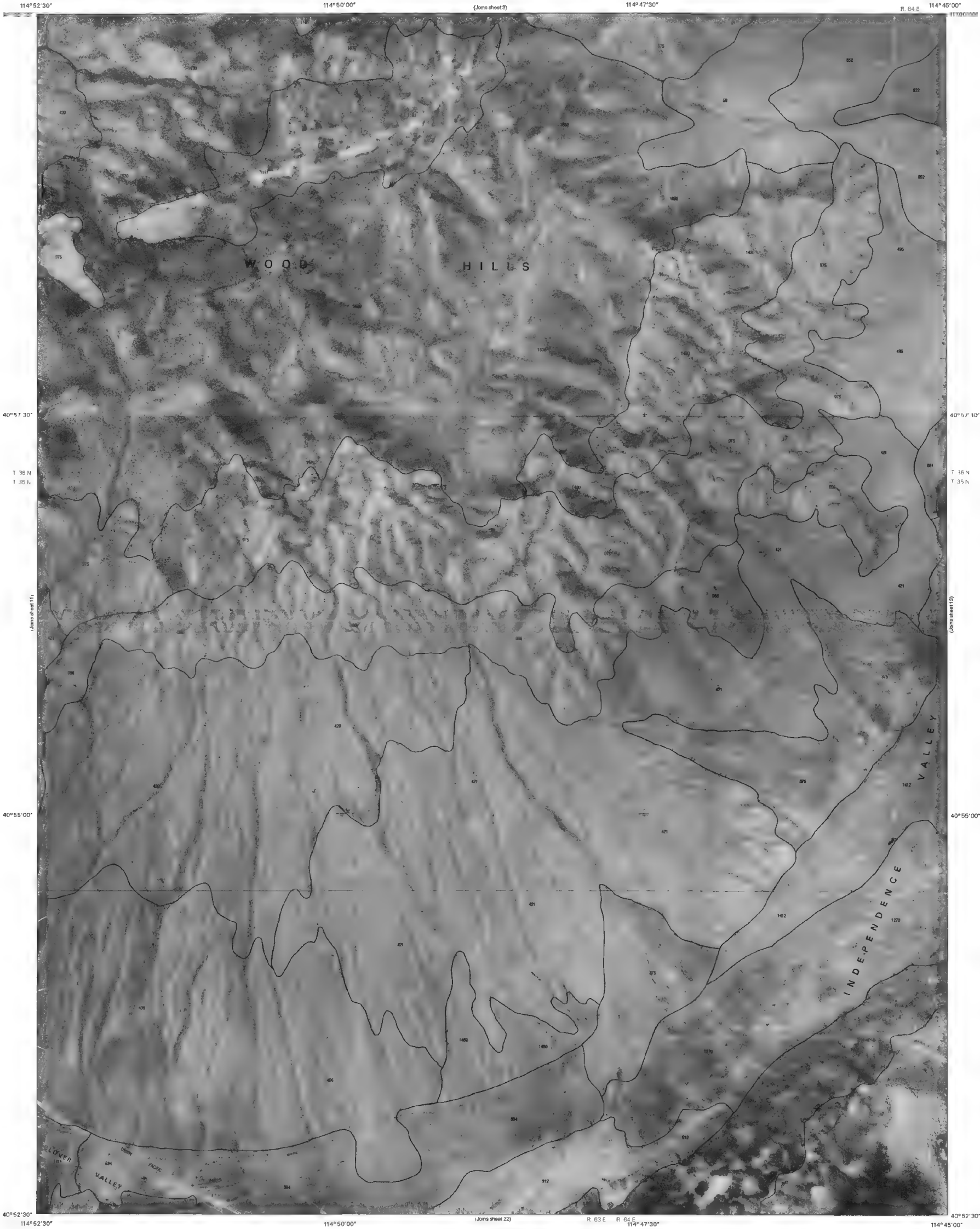


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks Universal Transverse Mercator, zone 11 Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

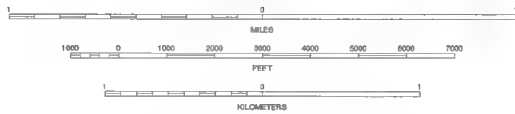


TOBAR, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 11 OF 98



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North American Datum of 1927 (NAD27). Clarke 1858 Spheroid. 1000 meter ticks: Universal Transverse Mercator zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



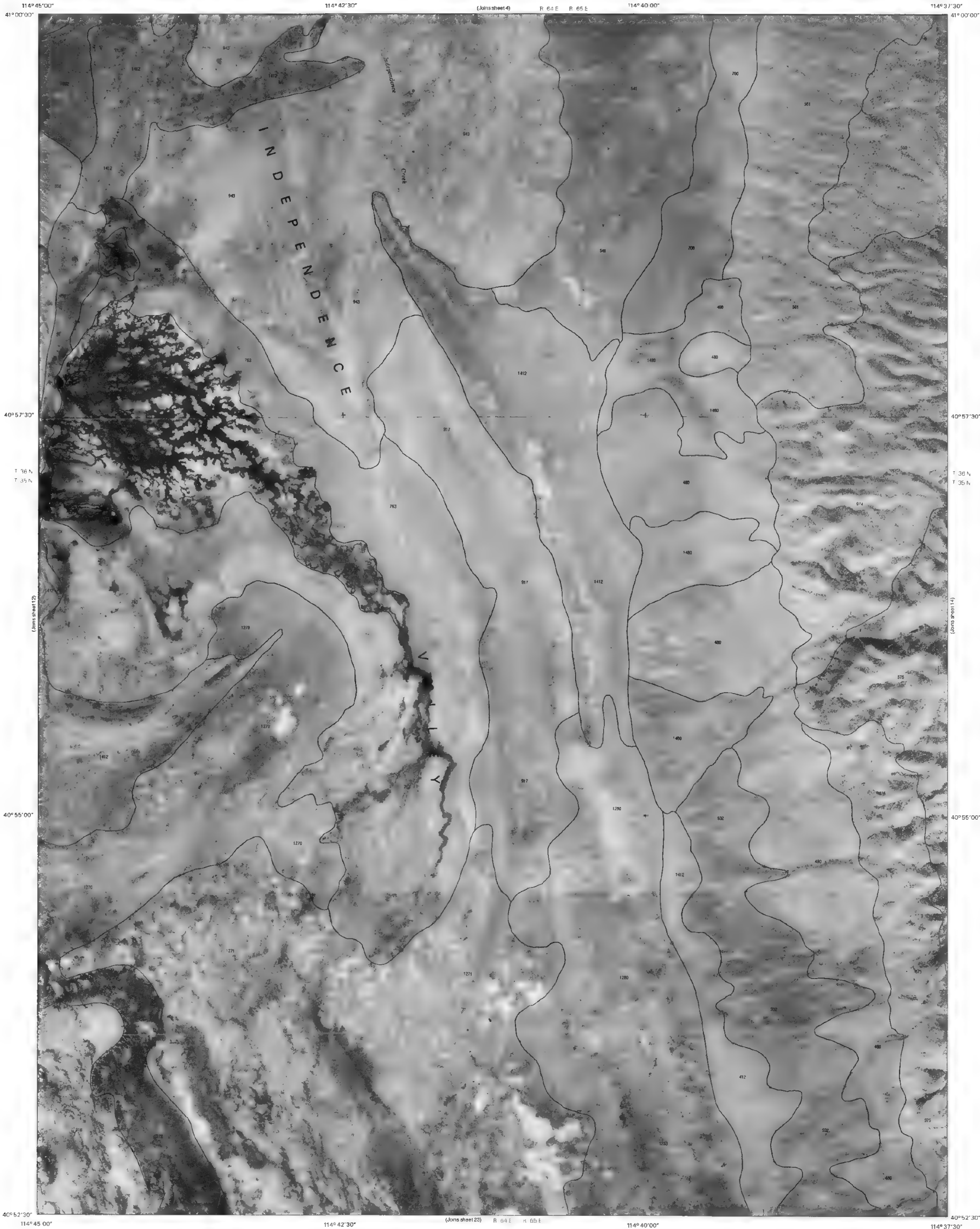
ELKO COUNTY, NEVADA SOUTHEAST PART NO. 12



SNOW WATER LAKE NE, NEVADA
7.5-MINUTE SERIES
SHEET NUMBER 12 OF 98

QUADRANGLE LOCATION							
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8

INDEX TO ADJOINING 7.5-MINUTE MAPS



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North American Datum of 1927 (NAD27) Clarke 1866 Spheroid 1000 meter ticks Universal Transverse Mercator zone 11 Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 13

INDEPENDENCE VALLEY NW, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 13 OF 98

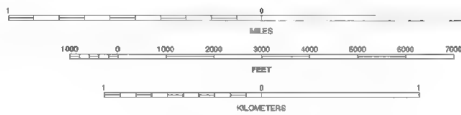
QUADRANGLE LOCATION				1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	4	5	6	7	8	9	10	11	12



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North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 14



INDEPENDENCE VALLEY NE, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 14 OF 98

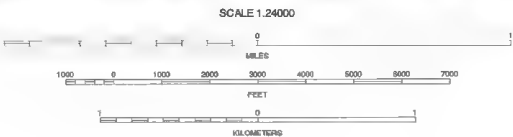
QUADRANGLE LOCATION			
1	2	3	1 PEQUOT SUMMIT SW
			2 PEQUOT SUMMIT
			3 GOSHUTE
			4 INDEPENDENCE VALLEY NW
4		5	5 HARDY CREEK
			6 INDEPENDENCE VALLEY SW
			7 INDEPENDENCE VALLEY SE
6	7	8	8 SHAFER

INDEX TO ADJOINING 7.5 MAPS



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North American Datum of 1927 (NAD27) Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11 Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 16



SILVER ZONE PASS, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 16 OF 98

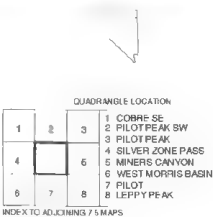
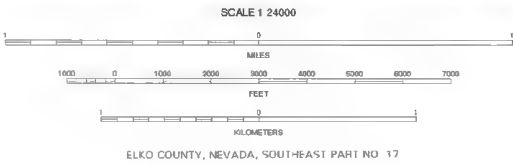
QUADRANGLE LOCATION			
1	2	3	1 COBRE
			2 COBRE SE
			3 PILOT PEAK SW
			4 HARDY CREEK
4		5	5 LEPPY PEAK NW
			6 SHAFER
			7 WEST MORRIS BASIN
6	7	8	8 PILOT

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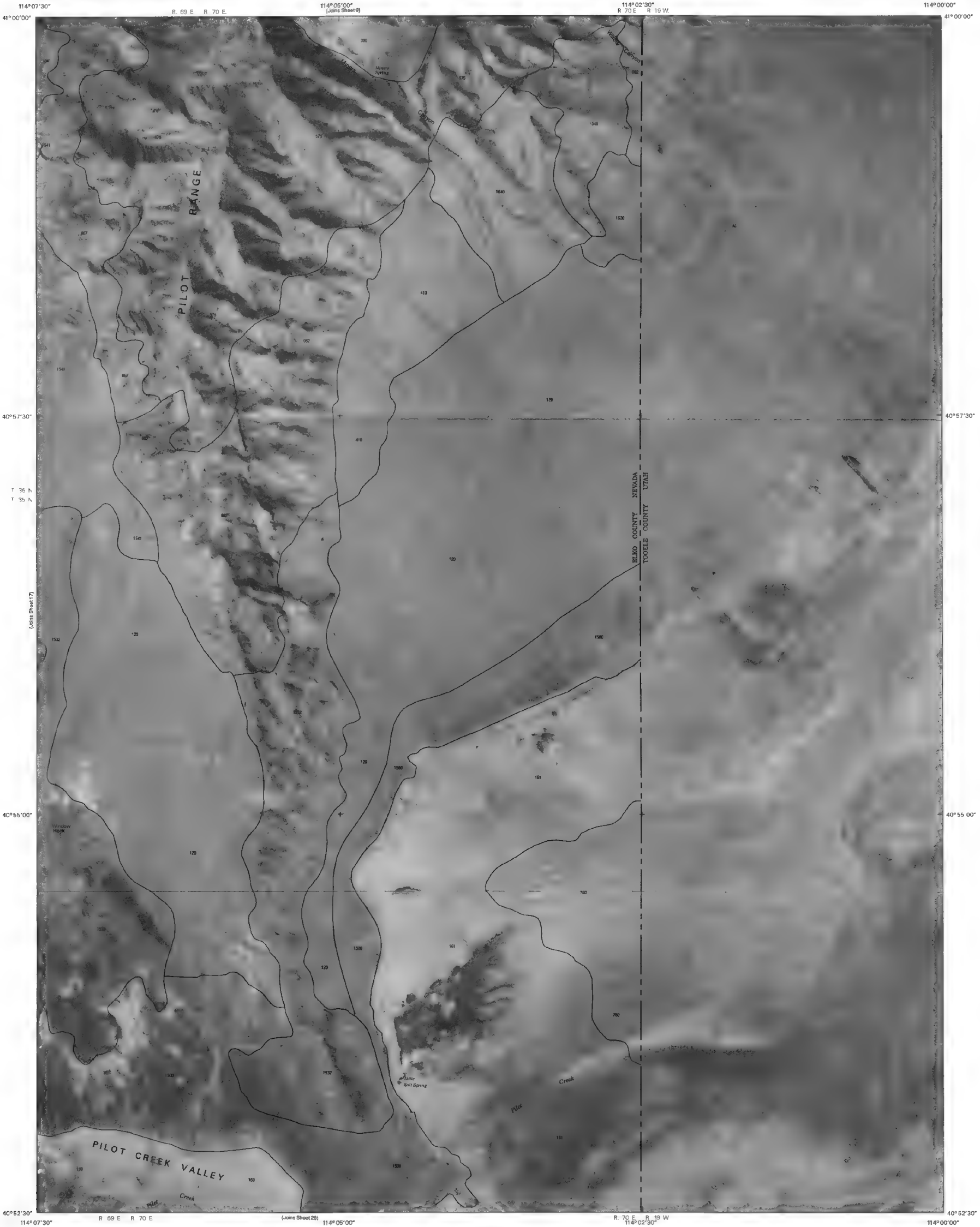


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North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



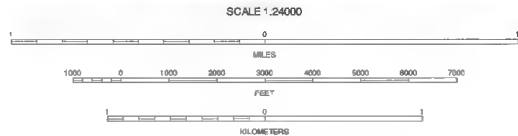
LEPPY PEAK NW, NEVADA
7.5-MINUTE SERIES
SHEET NUMBER 17 OF 98



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27), Clarke 1866 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 11
Coordinate grid ticks and level division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 18



MINERS CANYON, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 18 OF 98

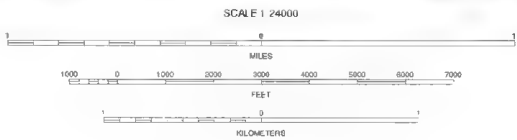
QUADRANGLE LOCATION				1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	4	5	6	7	8	9	10	11	12

INDEX TO ADJOINING 7.5 MAPS



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs created by the U.S. Department of Interior, Geological Survey from 1975 aerial photography.

North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks Universal Transverse Mercator, zone 11 Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTH-EAST PART NO 19

QUADRANGLE LOCATION			
1	2	3	4
5	6	7	8

INDEX TO ADJOINING 7.5 MAPS

SECRET VALLEY, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 19 OF 98

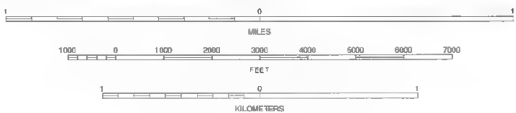


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

North Arrow

SCALE 1:24000



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 20

GORDON CREEK, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 20 OF 98

QUADRANGLE LOCATION			
1	2	3	1. TENT MOUNTAIN
			2. HUMBOLDT PEAK
			3. TOSAR
			4. SECRET VALLEY
4		5	5. SNOW WATER LAKE
			6. RUBY CITY CREEK
			7. ARIZONA SPRING
6	7	8	8. SPRUCE MOUNTAIN NW

INDEX TO ADJOINING 7.5 MAPS

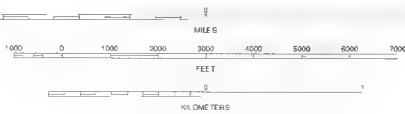


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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks Universal Transverse Mercator zone 11 Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



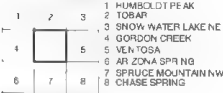
SCALE 1:24,000



ELKO COUNTY, NEVADA SOUTHEAST PART NO. 21

SNOW WATER LAKE, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 21 OF 98

QUADRANGLE LOCATION

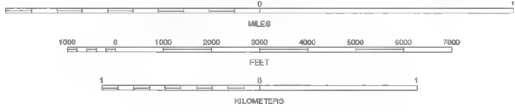


INDEX TO ADJOINING 7.5 MAPS



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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 11.
Coordinate grid lines and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 23

INDEPENDENCE VALLEY SW, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 23 OF 98

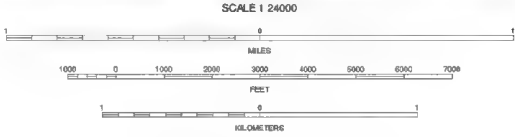
QUADRANGLE LOCATION				
1	2	3	4	1. SNOW WATER LAKE NE
5	6	7	8	2. INDEPENDENCE VALLEY NW
9	10	11	12	3. INDEPENDENCE VALLEY NE
13	14	15	16	4. VENTOSA
17	18	19	20	5. INDEPENDENCE VALLEY SE
21	22	23	24	6. CHASE SPRING
25	26	27	28	7. WHEATLE CANYON
29	30	31	32	8. FLOWERY LAKE

INDEX TO ADJOINING 7.5 MINUTE MAPS



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North American Datum of 1927 (NAD27). Clarke 1866 Spheroid. 1000-meter ticks. Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO 24

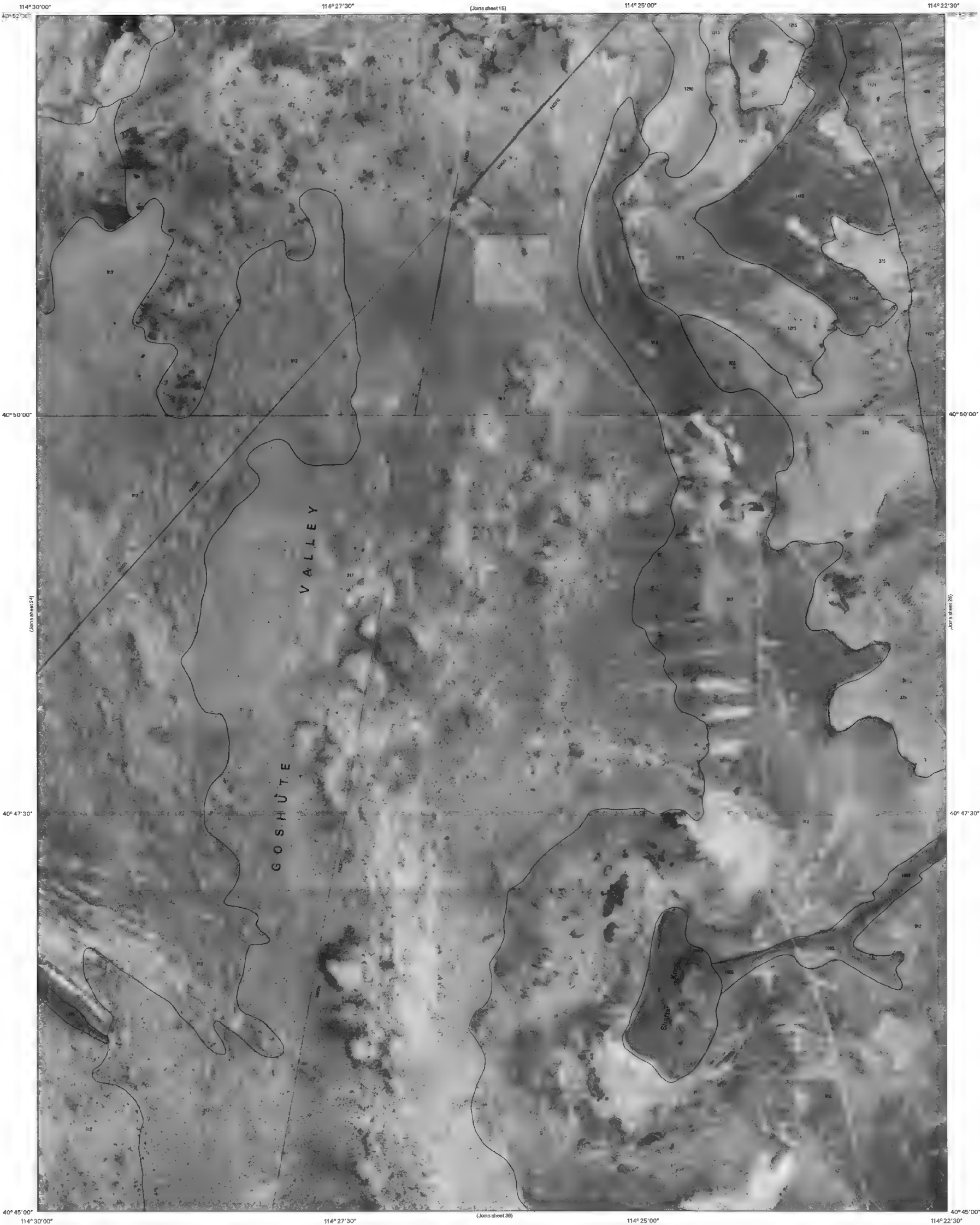


INDEPENDENCE VALLEY SE, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 24 OF 98

QUADRANGLE LOCATION

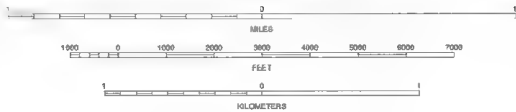
1	2	3	1 INDEPENDENCE VALLEY NW
4	5	6	2 INDEPENDENCE VALLEY NE
7	8	9	3 HARDY CREEK
10	11	12	4 INDEPENDENCE VALLEY SW
13	14	15	5 SHAFTER
16	17	18	6 NINE MILE CANYON
19	20	21	7 FLOWERY LAKE
22	23	24	8 DECOY

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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land distance data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 25

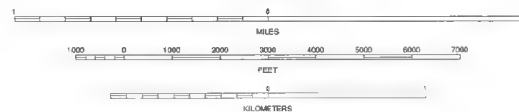
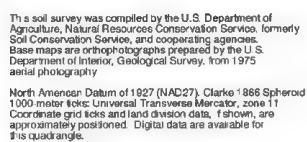


SHAFTER, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 25 OF 98

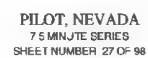
QUADRANGLE LOCATION				
1	2	3	4	1 INDEPENDENCE VALLEY NE
			5	2 HARDY CREEK
			6	3 SILVER ZONE PASS
4			7	4 INDEPENDENCE VALLEY SE
			8	5 WEST MORRIS BASIN
				6 FLOWERY LAKE
				7 DECOY
				8 MORGAN PASS

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ELKO COUNTY NEVADA, SOUTHEAST PART NO 27

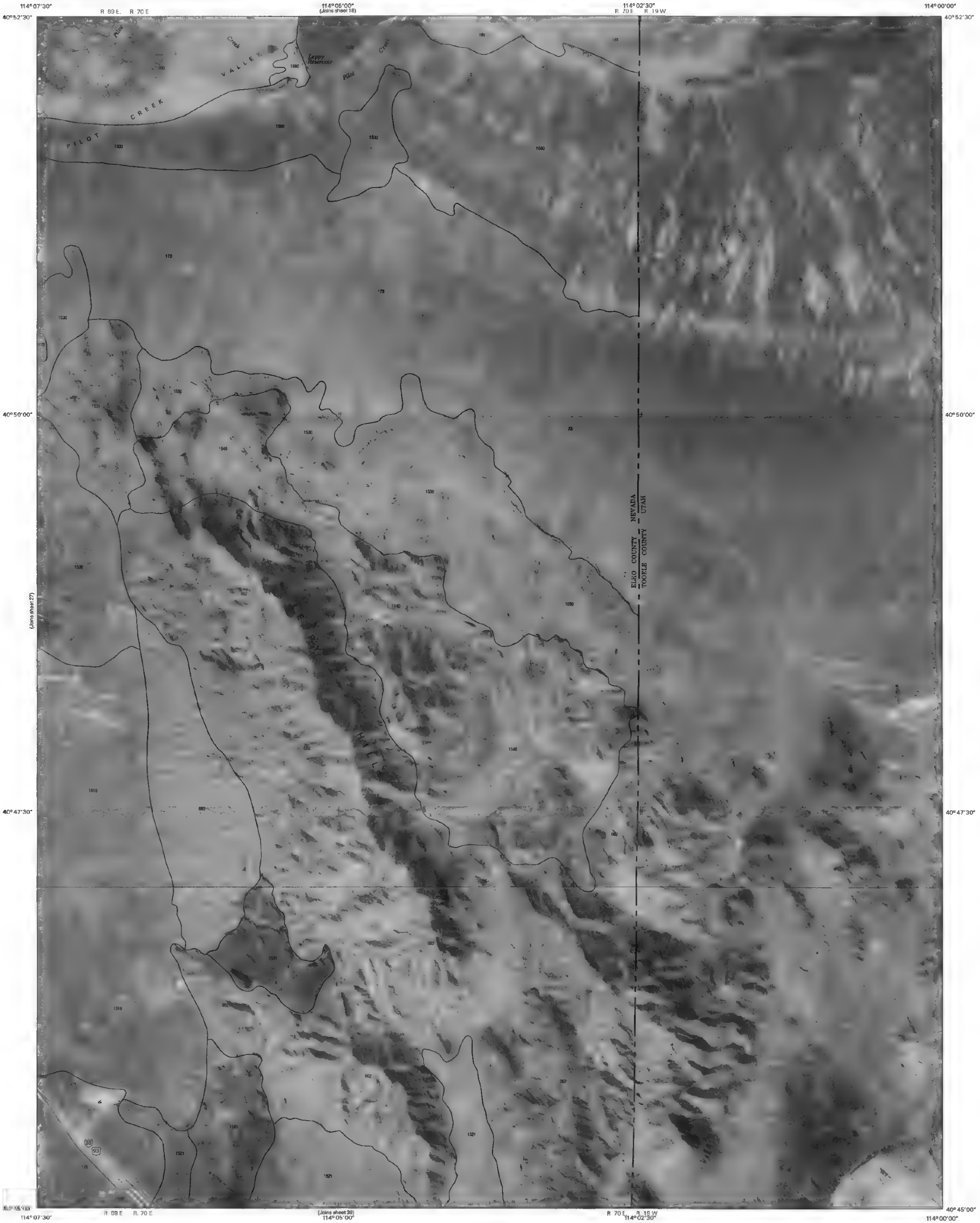


QUADRANGLE LOCATION		
1	2	3
4		5
6	7	8

1 SILVER ZONE PASS
2 LEPPY PEAK NW
3 MINERS CANYON
4 WEST MORRIS BASIN
5 LEPPY PEAK
6 MORGAN PASS
7 OLA
8 WENDOVER

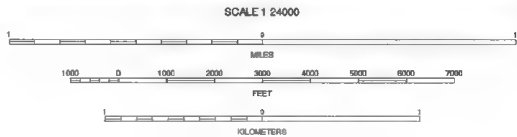
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This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1975 aerial photography.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks Universal Transverse Mercator, zone 11. Coordinates plus ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 28



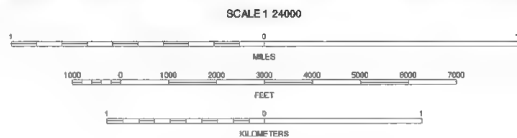
LEPPY PEAK, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 28 OF 98

QUADRANGLE LOCATION			
1	2	3	1. LEPPY PEAK NW
4	5	6	2. MINERS CANYON
7	8	9	3. SILVER ISLAND PASS
10	11	12	4. PILOT
13	14	15	5. TETZLAFF PEAK
16	17	18	6. OLA
19	20	21	7. WENDOVER
22	23	24	8. SILSBEE

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North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks. Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

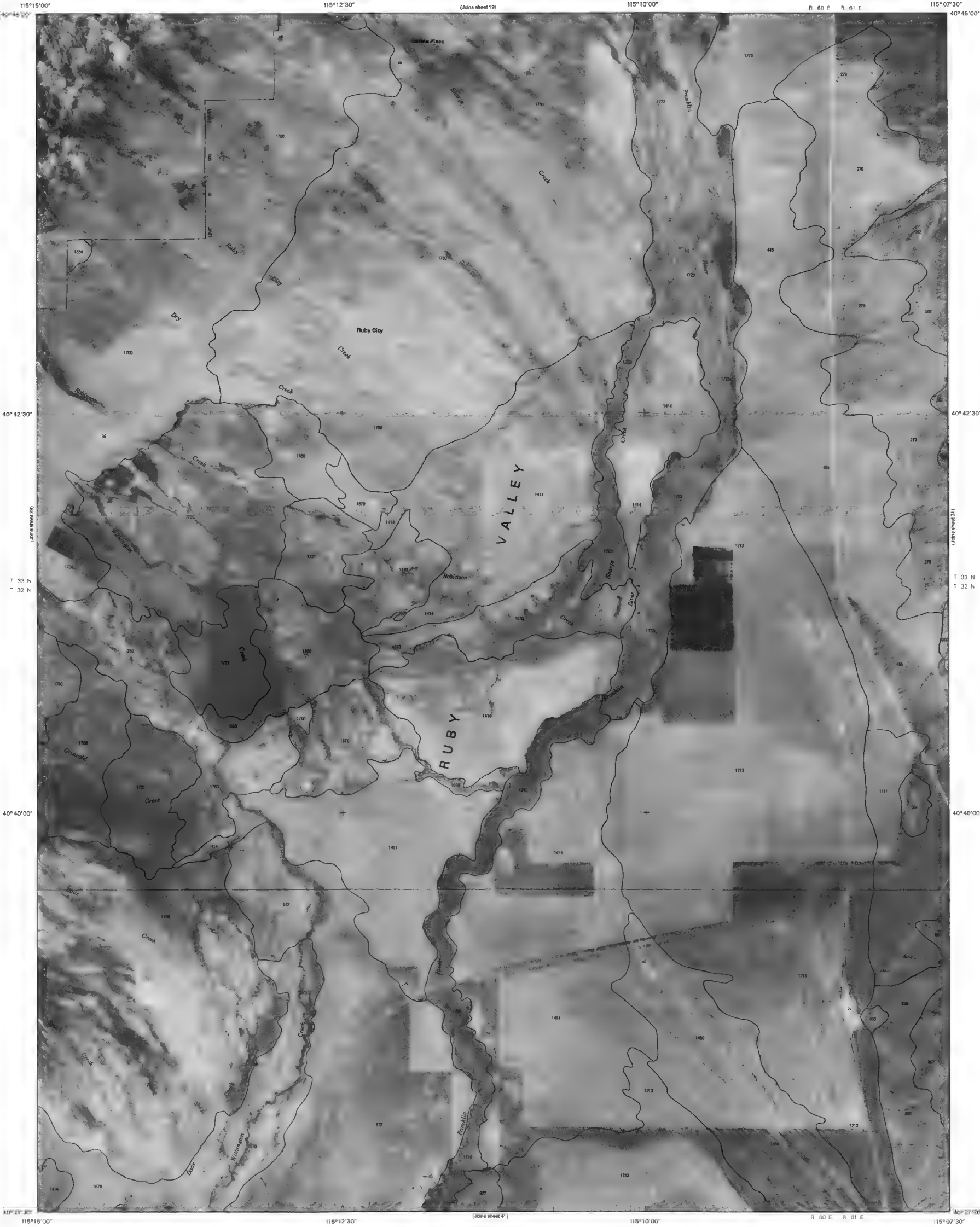


QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

1 HALLECK SW
2 SOLDIER PEAK
3 SECRET VALLEY
4 LAMOILE
5 RUBY CITY CREEK
6 RUBY DOME
7 RUBY VALLEY SCHOOL
8 SMITH WELL

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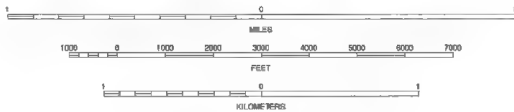


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are of topographic maps prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid. 1000-meter ticks Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

N 00° 00' E

SCALE 1:24000



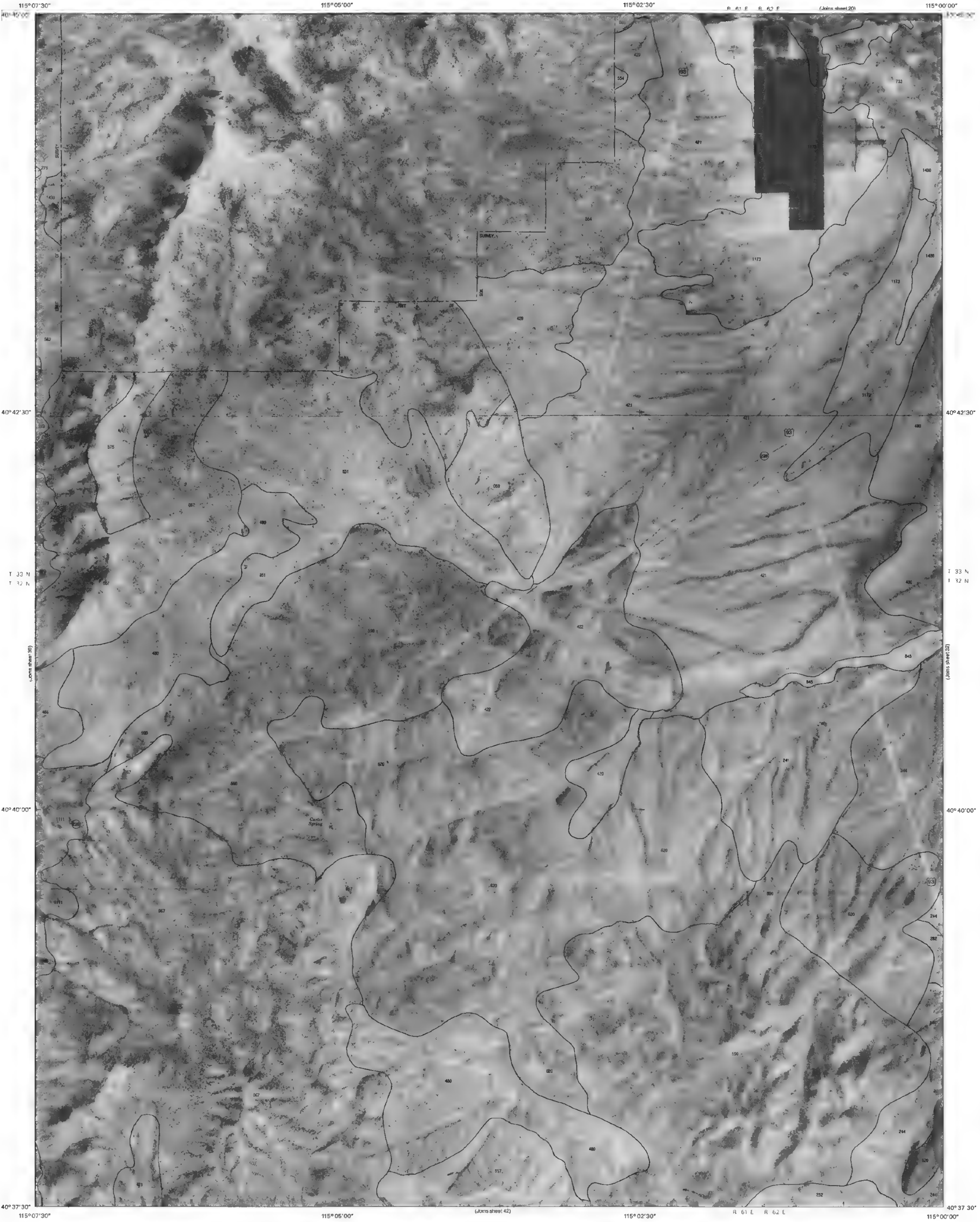
ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 30



RUBY CITY CREEK, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 30 OF 98

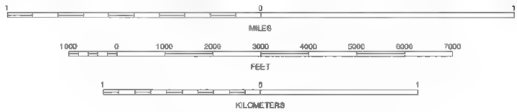
QUADRANGLE LOCATION			
1	2	3	1 SOLDIER PEAK
4	5	6	2 SECRET VALLEY
7	8	9	3 GORDON CREEK
			4 VERDI PEAK
			5 ARIZONA SPRING
			6 RUBY VALLEY SCHOOL
			7 SMITH WELL
			8 VALLEY MOUNTAIN

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North American Datum of 1927 (NAD27). Clarke 1866 Spheroid. 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 31



ARIZONA SPRING, NEVADA
7 5 MINUTE SERIES
SHEET NUMBER 31 OF 98

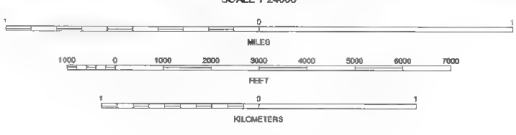
QUADRANGLE LOCATION			
1	2	3	1 SECRET VALLEY
4	5	6	2 GORDON CREEK
7	8	9	3 SNOW WATER LAKE
10	11	12	4 RUBY CITY CREEK
13	14	15	5 SPRUCE MOUNTAIN NW
16	17	18	6 SMITH WELL
19	20	21	7 VALLEY MOUNTAIN
22	23	24	8 SPRUCE WELL

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North American Datum of 1983 (NAD83). Clarke 1866 Spheroid 1000-meter ticks. Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 32



SPRUCE MOUNTAIN NW, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 32 OF 98

QUADRANGLE LOCATION			
1	2	3	1 GORDON CREEK
			2 SNOW WATER LAKE
			3 VENTOSA
4		5	4 ARIZONA SPRING
			5 CHASE SPRING
6	7	8	6 VALLEY MOUNTAIN
			7 SPRUCE WELL
			8 SPRUCE MOUNTAIN

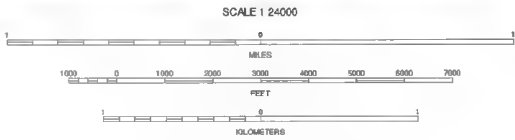
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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11 Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



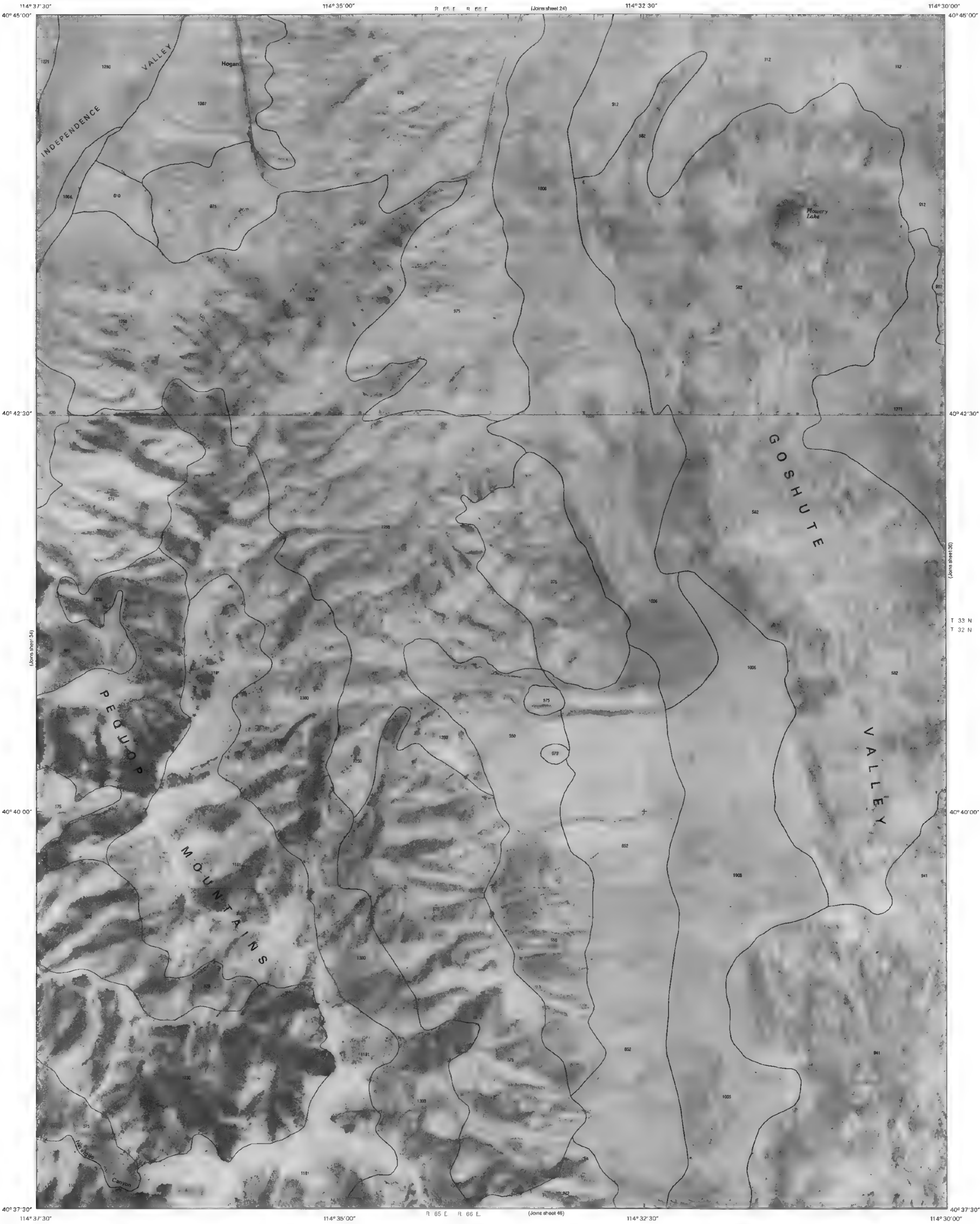
ELKO COUNTY, NEVADA, SOUTHEAST PART NO 34



NINEMILE CANYON, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 34 OF 98

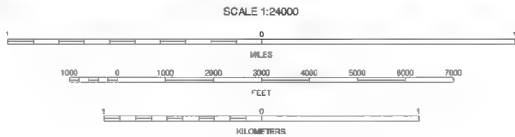
QUADRANGLE LOCATION			1	2	3
1	2	3	1 VENTOSA	2 INDEPENDENCE VALLEY SW	3 INDEPENDENCE VALLEY SE
4	5	6	4 CHASE SPRING	5 FLOWER Y LAKE	6 SPRUCE MOUNTAIN
7	8	9	7 BUCKLE SPRING	8 DOLLY VARDEN	

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North American Datum of 1927 (NAD27). Clarke 1866 Spheroid. 1000-meter ticks Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



FLOWERY LAKE, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 35 OF 98

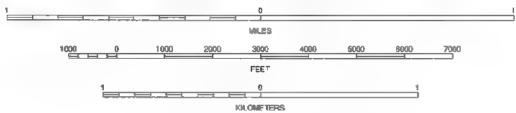
QUADRANGLE LOCATION			
1	2	3	1 INDEPENDENCE VALLEY SW
			2 INDEPENDENCE VALLEY SE
			3 SHAR TER
			4 NINE-MILE CANYON
4		5	5 DECOY
			6 BOONE SPRINGS
			7 DOLLY GARDEN
6	7	8	8 DECOY SW

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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks, Universal Transverse Mercator, zone 11 Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 36

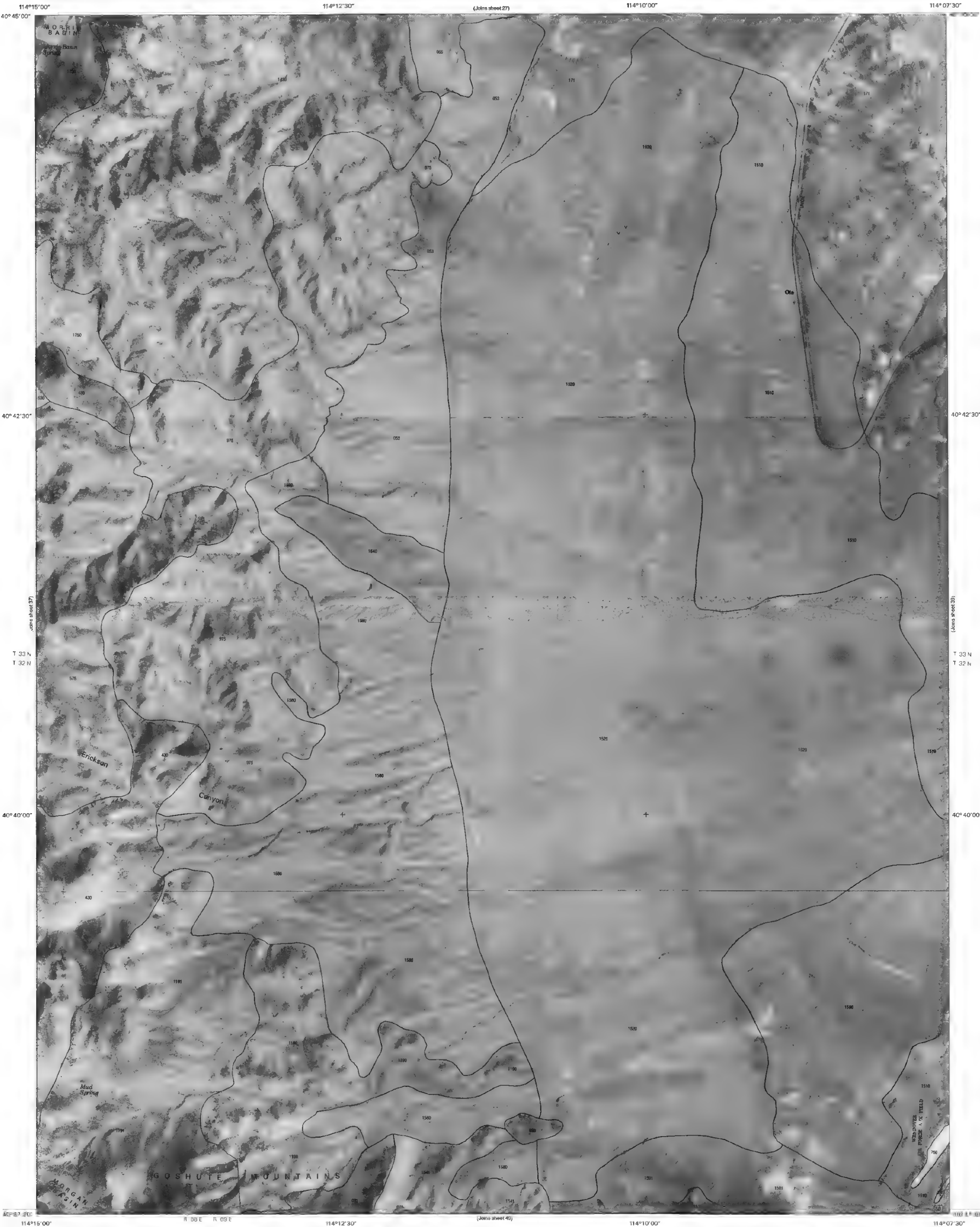


DECOY, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 36 OF 98

QUADRANGLE LOCATION			1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8	9	10	11
1	2	3	4	5	6	7	8	9	10	11

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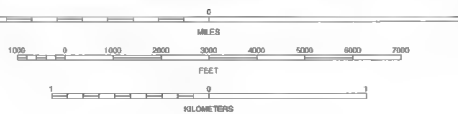




This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter scale: Universal Transverse Mercator zone 11. Coordinate grid ticks and land divider data, if shown, are approximately positioned. Digital data are available for this quadrangle.

SCALE 1:24000



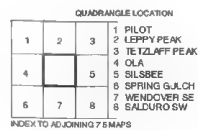
ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 38

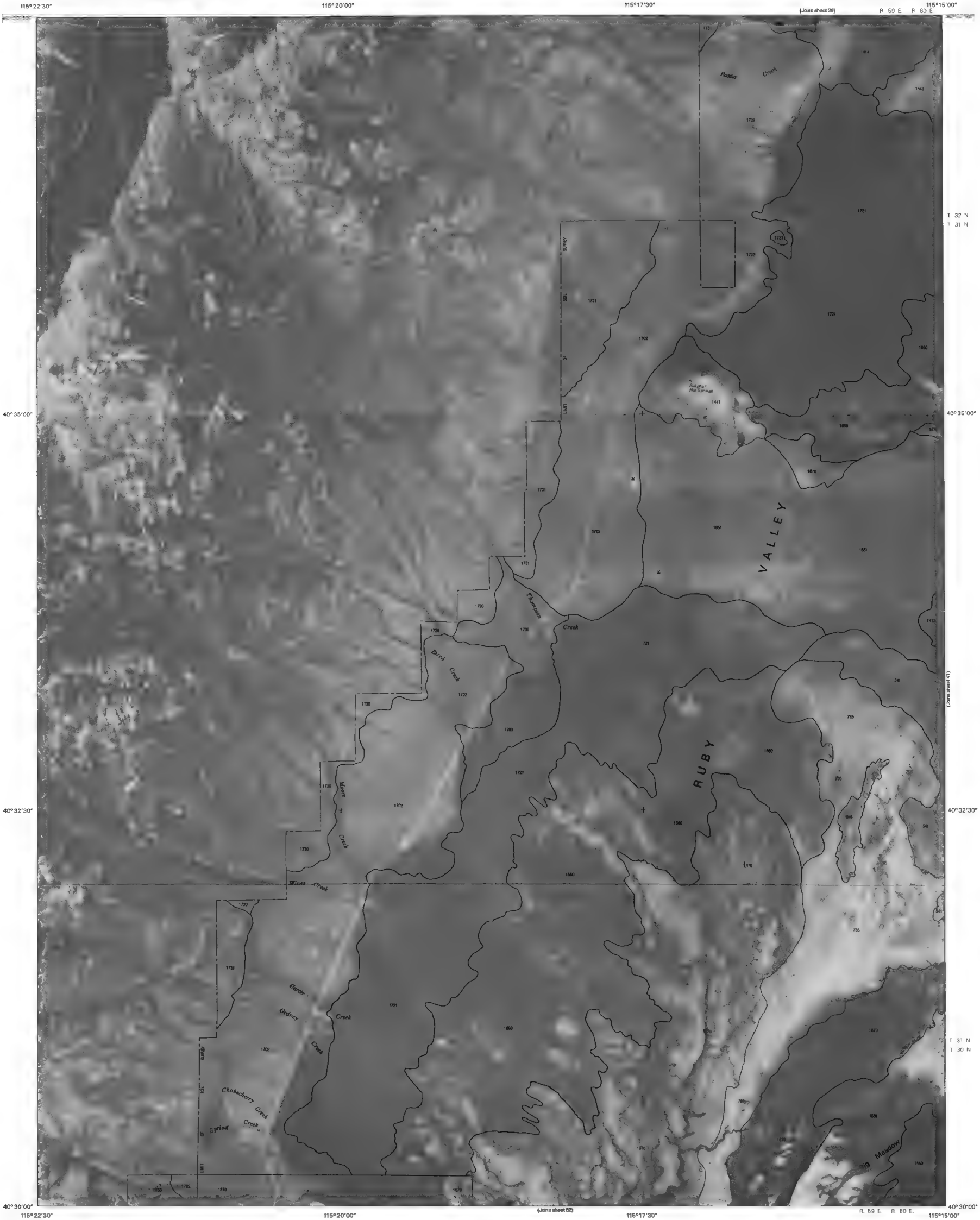


OLA, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 38 OF 98

QUADRANGLE LOCATION			
1	2	3	1 WEST MORRIS BASIN
4	5	6	2 PILOT
7	8	9	3 LIPPY PEAK
10	11	12	4 MORGAN PASS
13	14	15	5 WENDOVER
16	17	18	6 LION SPRING
19	20	21	7 SPRING LAUNCH
22	23	24	8 WENDOVER SE

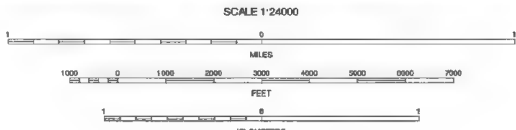
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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid
1000-meter scale: Universal Transverse Mercator, zone 11.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 40



RUBY VALLEY SCHOOL, NEVADA
7 1/2 MINUTE SERIES
SHEET NUMBER 40 OF 98

QUADRANGLE LOCATION							
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8

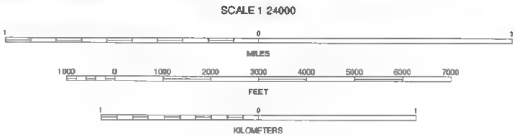
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North American Datum of 1983 (NAD83), Clarke 1866 Spheroid 1000 meter ticks: Universal Transverse Mercator, zone 11. Coordinates grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



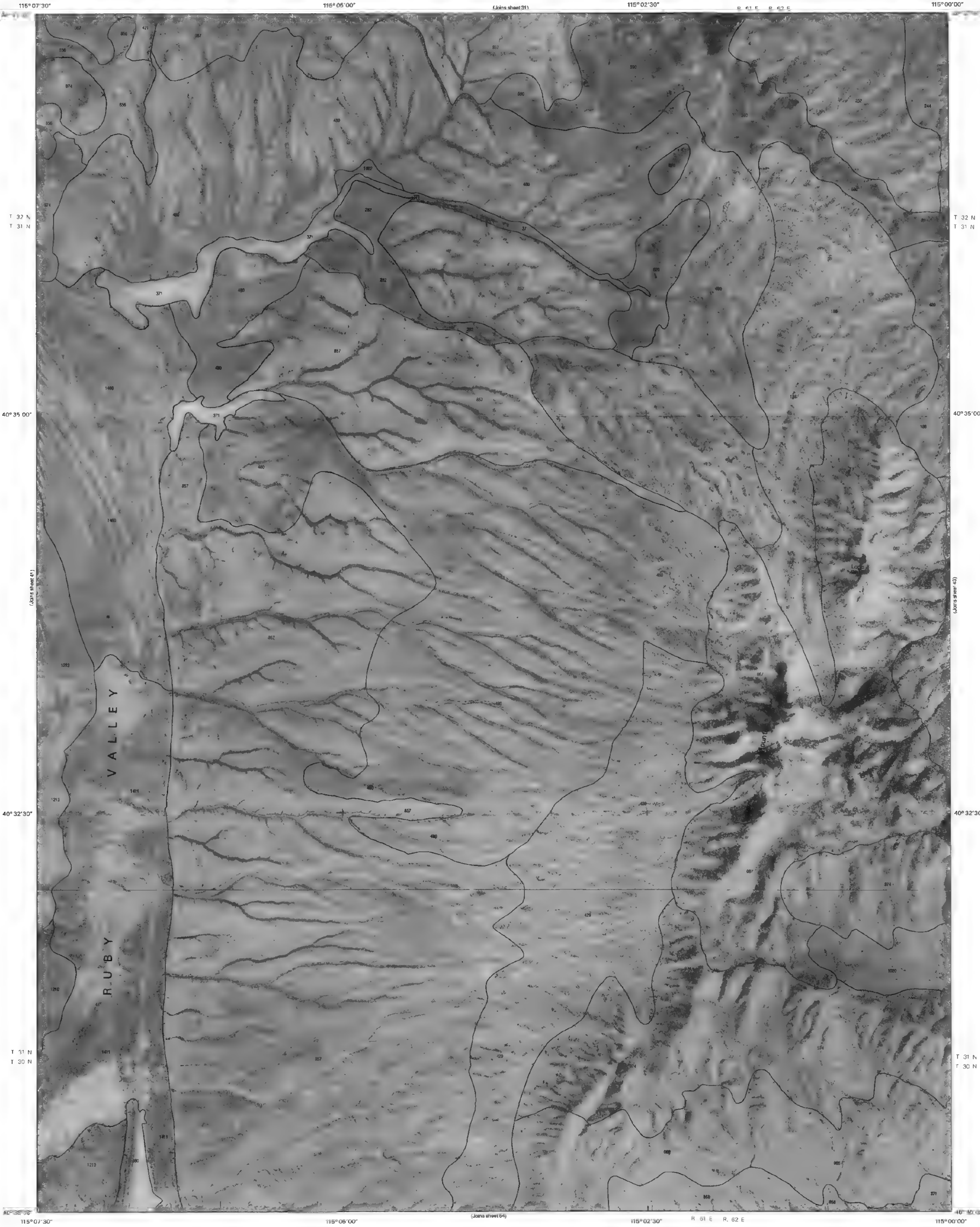
ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 41



SMITH WELL, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 41 OF 98

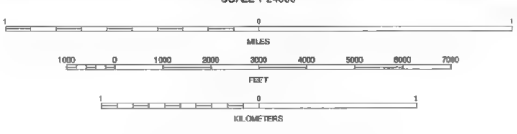
QUADRANGLE LOCATION			1	2	3	4	5	6	7	8
1	2	3	VERDI PEAK	4	5	6	7	8	9	10
4	5	6	RUBY CITY CREEK	7	8	9	10	11	12	13
7	8	9	ARIZONA SPRING	10	11	12	13	14	15	16
10	11	12	RUBY VALLEY SCHOOL	13	14	15	16	17	18	19
13	14	15	VALLEY MOUNTAIN	16	17	18	19	20	21	22
16	17	18	FRANKLIN LAKE NE	19	20	21	22	23	24	25
19	20	21	WEST OF DELICER BUTTES	22	23	24	25	26	27	28
22	23	24	DELICER BUTTES	25	26	27	28	29	30	31

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North American Datum of 1927 (NAD27). Clarke 1866 Spheroid. 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 42

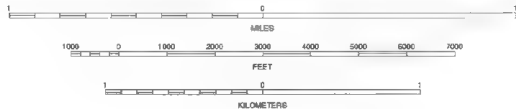
QUADRANGLE LOCATION			
1	2	3	1 RUBY CITY CREEK
4	5	6	2 ARIZONA SPRING
7	8	9	3 SPRUCE MOUNTAIN NW
			4 SMITH WELL
			5 SPRUCE WELL
			6 WEST OF DELZER BUTTES
			7 DELZER BUTTES
			8 PALOMINO WELL

VALLEY MOUNTAIN, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 42 OF 98



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27), Clarke 1866 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 11.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 43



SPRUCE WELL, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 43 OF 98

QUADRANGLE LOCATION			1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8	9	10	11
1	2	3	4	5	6	7	8	9	10	11
1	2	3	4	5	6	7	8	9	10	11

1 ARIZONA SPRING
2 SPRUCE MOUNTAIN NW
3 CHASE SPRING
4 VALLEY MOUNTAIN
5 SPRUCE MOUNTAIN
6 DEL CER BUTTES
7 PALOMINO HILL
8 PALOMINO RIDGE

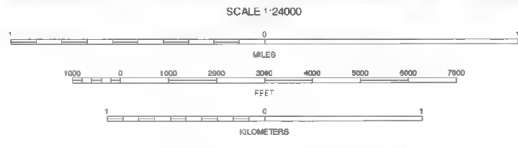
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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks. Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



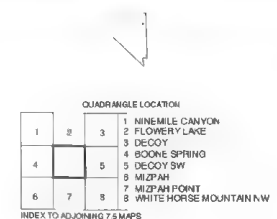
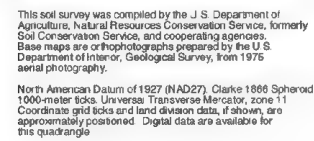
ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 45



BOONE SPRING, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 45 OF 98

QUADRANGLE LOCATION			
1	2	3	1 CHASE SPRING
			2 NINEMILE CANYON
			3 FLOWERY LAKE
4		5	4 SPRUCE MOUNTAIN
			5 DOLLY VARDEN
			6 PALOMINO RIDGE
5	7	8	7 MIZPAH
			8 MIZPAH POINT

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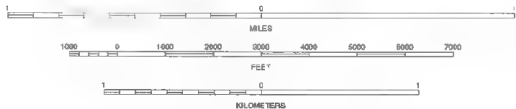




This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid. 1000-meter ticks. Universal Transverse Mercator, zone 11. Coordinate grid ticks and grid division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

80° 15'



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 47

QUADRANGLE LOCATION			
1	2	3	1 FLOWERY LAKE
			2 DECOY
			3 MORGAN PASS
			4 DOLLY VARDEN
			5 LION SPRING
4		5	6 MUPAH POINT
			7 WHITE HORSE MOUNTAIN NW
			8 GOSHUTE PEAK
6	7	8	

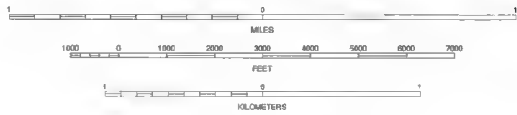
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DECOY SW, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 47 OF 98



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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1:000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



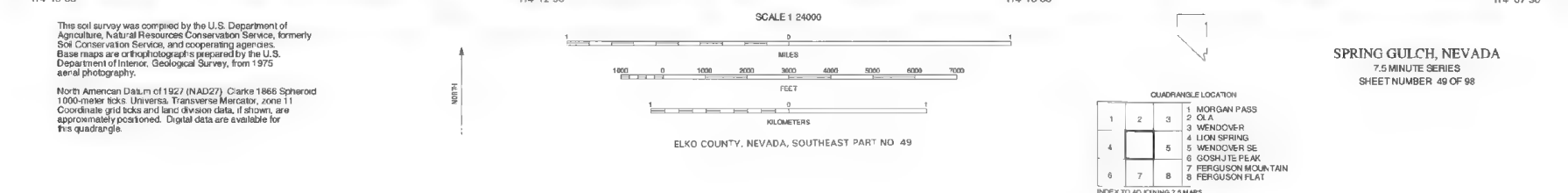
ELKO COUNTY, NEVADA, SOUTHEAST PART NO 48

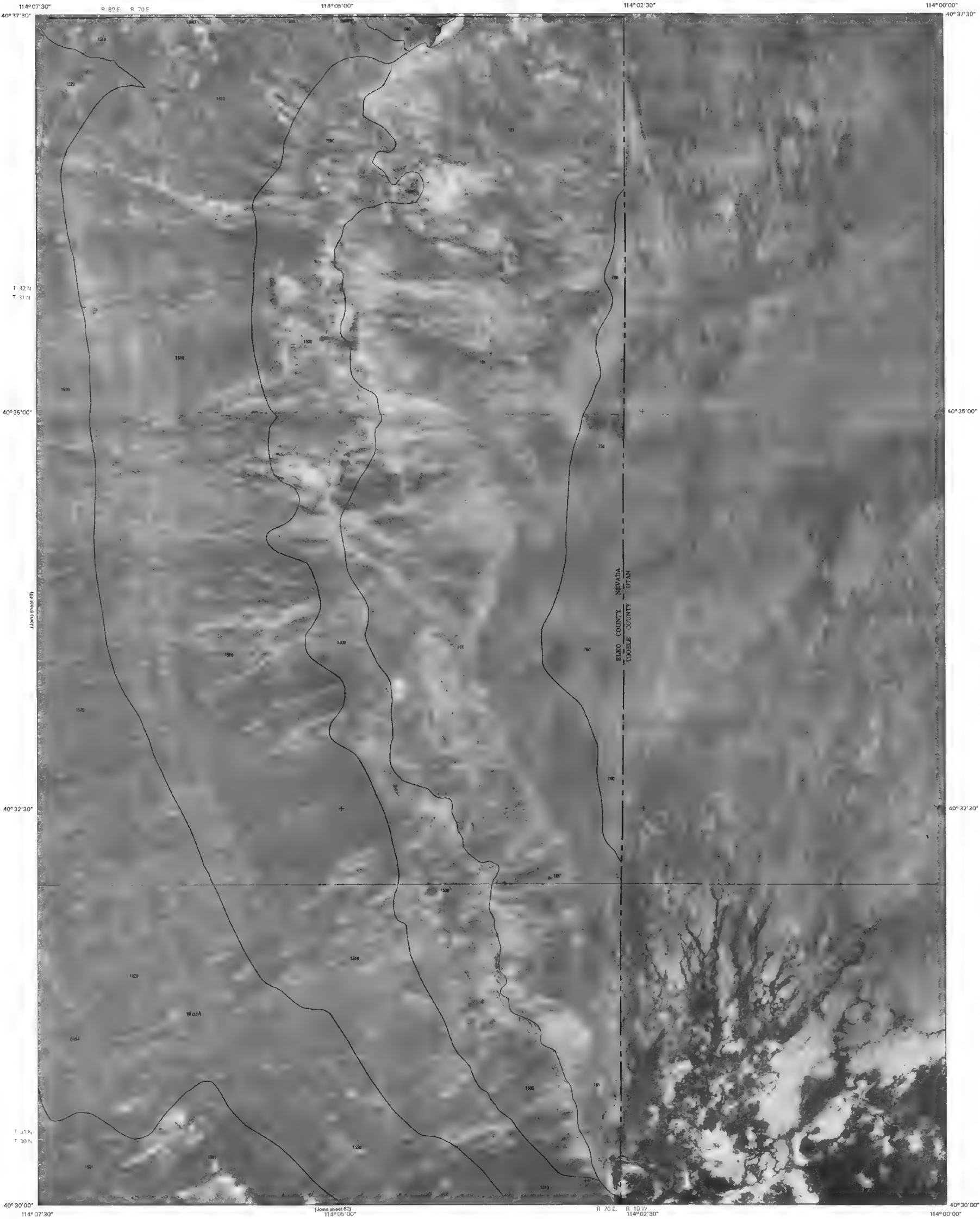


LION SPRING, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 48 OF 98

QUADRANGLE LOCATION							
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8

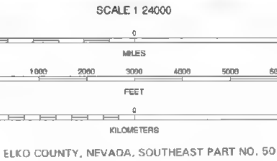
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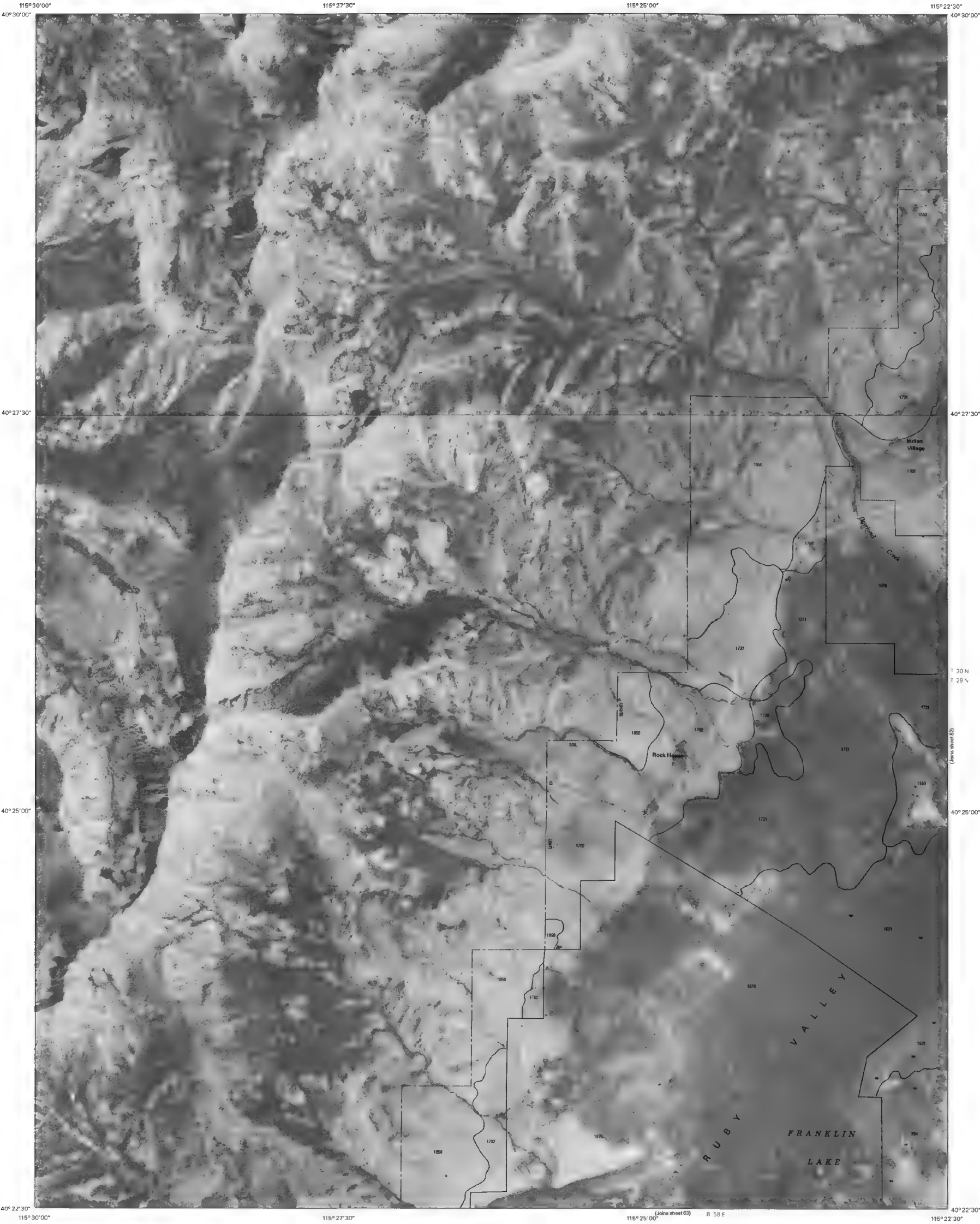
North American Datum of 1927 (NAD27). Clarke 1866 Spheroid. 1000-meter bars: Universal Transverse Mercator zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION							
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8

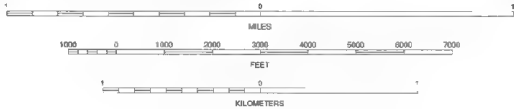
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WENDOVER SE, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 50 OF 98



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are of photographs created by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27) Clarke 1866 Spheroid 1000-meter ticks Universal Transverse Mercator zone 11 Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 51

FRANKLIN LAKE NW, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 51 OF 98

QUADRANGLE LOCATION			
1	2	3	1 LEE
			2 RUBY DOME
			3 RUBY VALLEY SCHOOL
			4 GREEN MOUNTAIN
4		5	5 FRANKLIN LAKE NE
			6 HARRISON PASS
			7 FRANKLIN LAKE SW
6	7	8	8 FRANKLIN LAKE SE

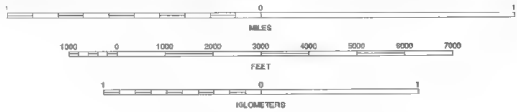
INDEX TO ADJOINING 7.5 MAPS





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North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter box. Universal Transverse Mercator, zone 11. Coordinate grid data and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 53

WEST OF DELCER BUTTES, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 53 OF 98

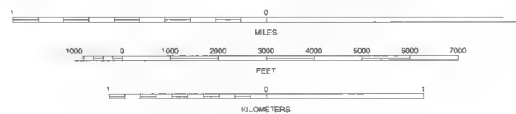
QUADRANGLE LOCATION				1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	4	5	6	7	8	9	10	11	12

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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1:000-meter ticks Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 54



DELGER BUTTES, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 54 OF 98

QUADRANGLE LOCATION			
1	2	3	1 SMITH WELL
			2 VALLEY MOUNTAIN
			3 SPRUCE WELL
			4 WEST OF DELGER BUTTES
4		5	5 PALOMINO WELL
			6 MEDICINE SPRING
			7 CIGGERS RANCH
			8 SILO CANYON
6	7	8	

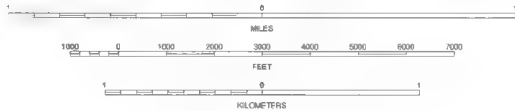
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This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks, Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

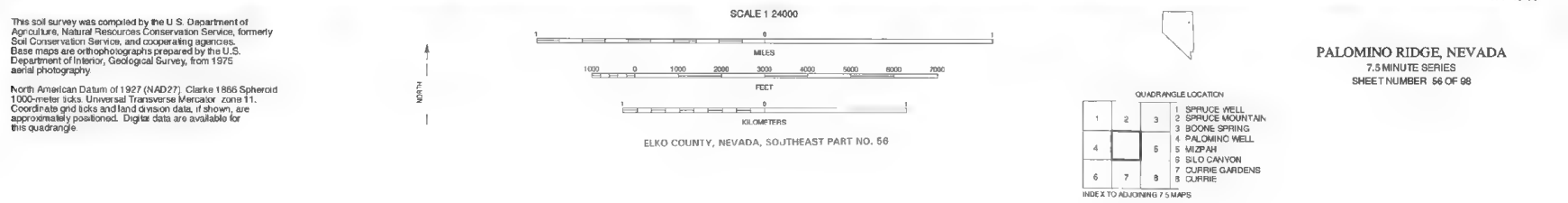


ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 55

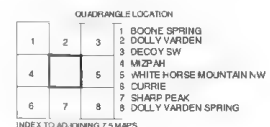
QUADRANGLE LOCATION			
1	2	3	1 VALLEY MOUNTAIN
4	5	6	2 SPRUCE WELL
7	8	9	3 SPRUCE MOUNTAIN
10	11	12	4 DEL CER BLTTES
13	14	15	5 PALOMINO RIDGE
16	17	18	6 ODGERS RANCH
19	20	21	7 SLO CANYON
22	23	24	8 CURRIE GARDENS

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PALOMINO WELL, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 55 OF 98



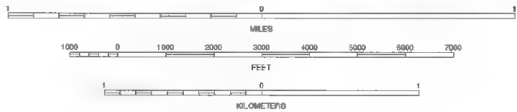






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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000 meter ticks Universal Transverse Mercator, zone 11. Coordinate grid lines and land revision data, if shown, are approximately positioned. Digital data are available for this quadrangle.



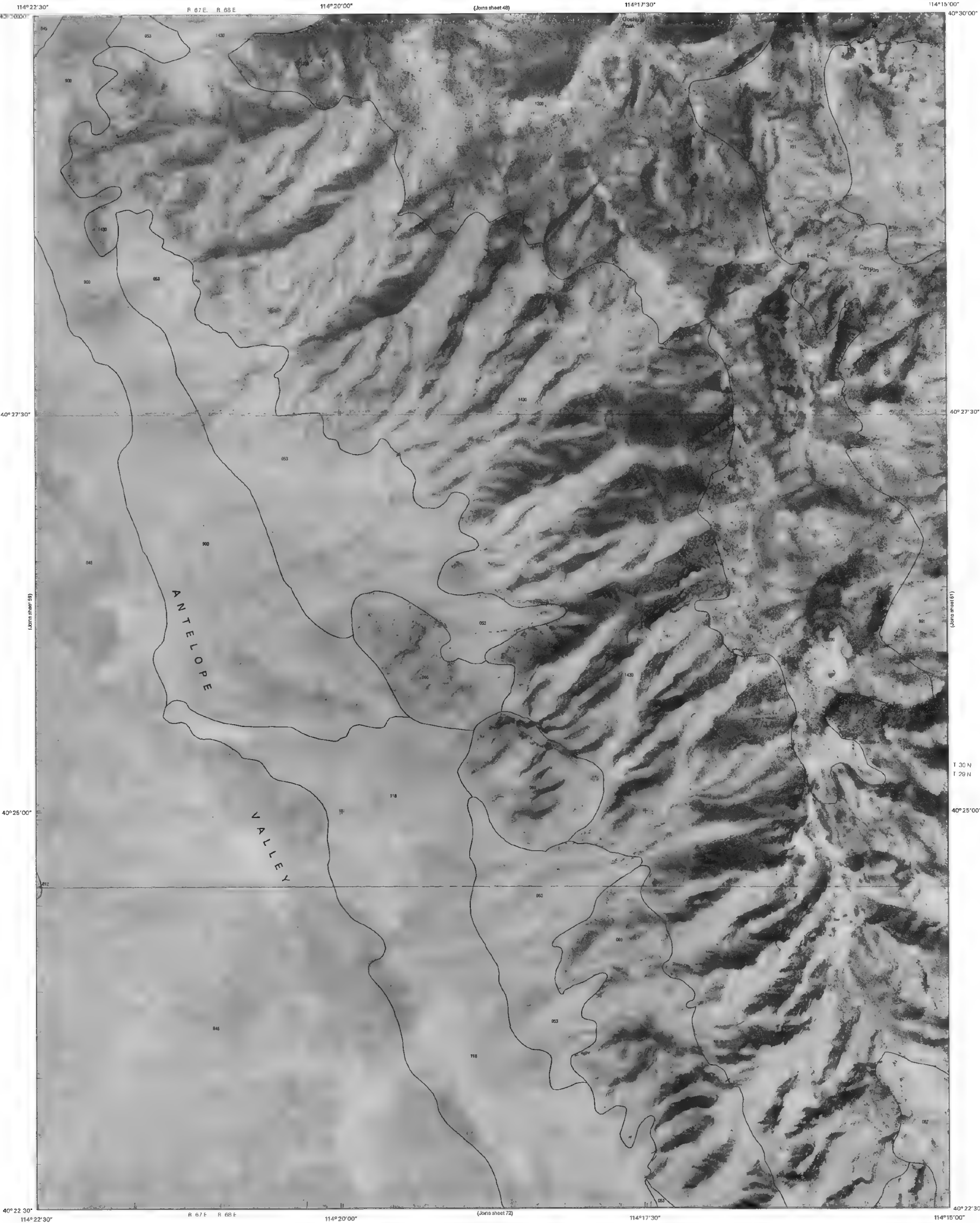
ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 59



WHITE HORSE MOUNTAIN NW, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 59 OF 98

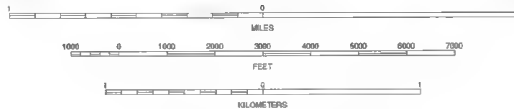
QUADRANGLE LOCATION			
1	2	3	1 DOLLY VARDEN
			2 DECOY SW
			3 LION SPRING
4		5	4 MIDWAY POINT
			5 GOSHUTE PEAK
			6 SHARP PEAK
6	7	8	7 DOLLY VARDEN SPRING
			8 WHITE HORSE MOUNTAIN

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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks. Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



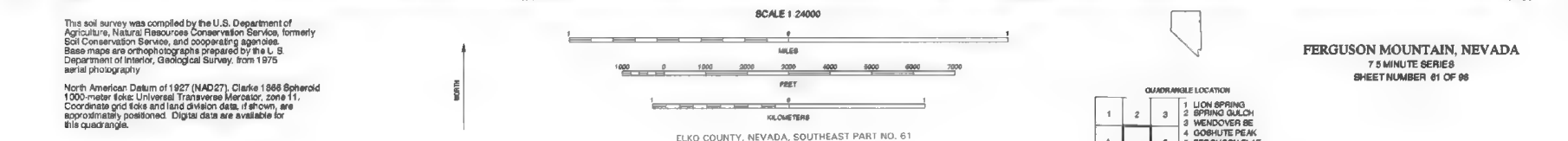
ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 60



GOSHUTE PEAK, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 60 OF 98

QUADRANGLE LOCATION					
1	2	3	4	5	6
1 DECOY SW	2 LION SPRING	3 SPRING GULCH	4 WHITE HORSE MOUNTAIN NW	5 FERGUSON MOUNTAIN	6 DOLLY VARDEN SPRING
7 WHITE HORSE MOUNTAIN	8 WHITE HORSE PASS				

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North American Datum of 1927 (NAD 27). Clarke 1886 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 11.
Coordinate grid ticks and land division data, if shown, are
approximately positioned. Digital data are available for
this quadrangle.

ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 61

FERGUSON MOUNTAIN, NEVADA
7 5 MINUTE SERIES
SHEET NUMBER 81 OF 98

QUADRANGLE LOCATION		
1	2	3
4		6
6	7	8

1 LION SPRING
2 SPRING GULCH
3 WENDOVER BE
4 GOBHUTE PEAK
5 FERGUSON FLAT
6 WHITE HORSE MOUNTAIN
7 WHITE HORSE PASS
8 UTAH PEAK

REFLECT TO ADJACENT T.S. MAPS

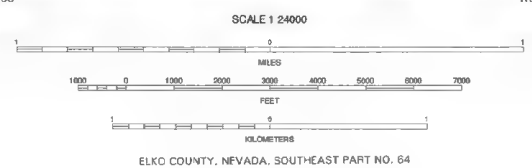






This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid. 1000-meter ticks. Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



FRANKLIN LAKE SE, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 64 OF 98

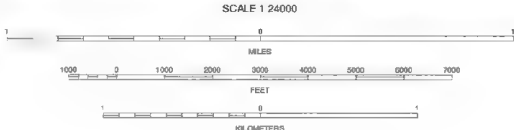
QUADRANGLE LOCATION							
1	2	3	4	5	6	7	8
1 FRANKLIN LAKE NW 2 FRANKLIN LAKE NE 3 WEST OF DELICER BUTTES 4 FRANKLIN LAKE SW 5 MEDICINE SPRING 6 RUBY LAKE NW 7 RUBY LAKE NE 8 HIGH BALD PEAKS							

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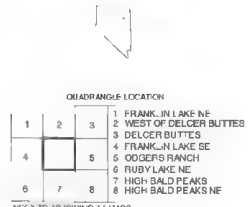


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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 65



MEDICINE SPRING, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 65 OF 98

115°07'30" 115°05'00" (Jones sheet 54) 115°02'30" R 61 E R 62 E 115°00'00"

T 29 N
T 28 N

T 29 N
T 28 N

40°20'00"

40°20'00"

(Jones sheet 53)

(Jones sheet 67)

40°17'30"

40°17'30"

T 28 N
T 27 N

T 28 N
T 27 N

40°15'00"

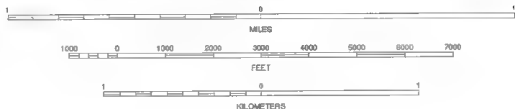
40°15'00"

115°05'00"

115°02'30"

115°00'00"

SCALE 1:24000



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 66

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey from 1975 aerial photography.

North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

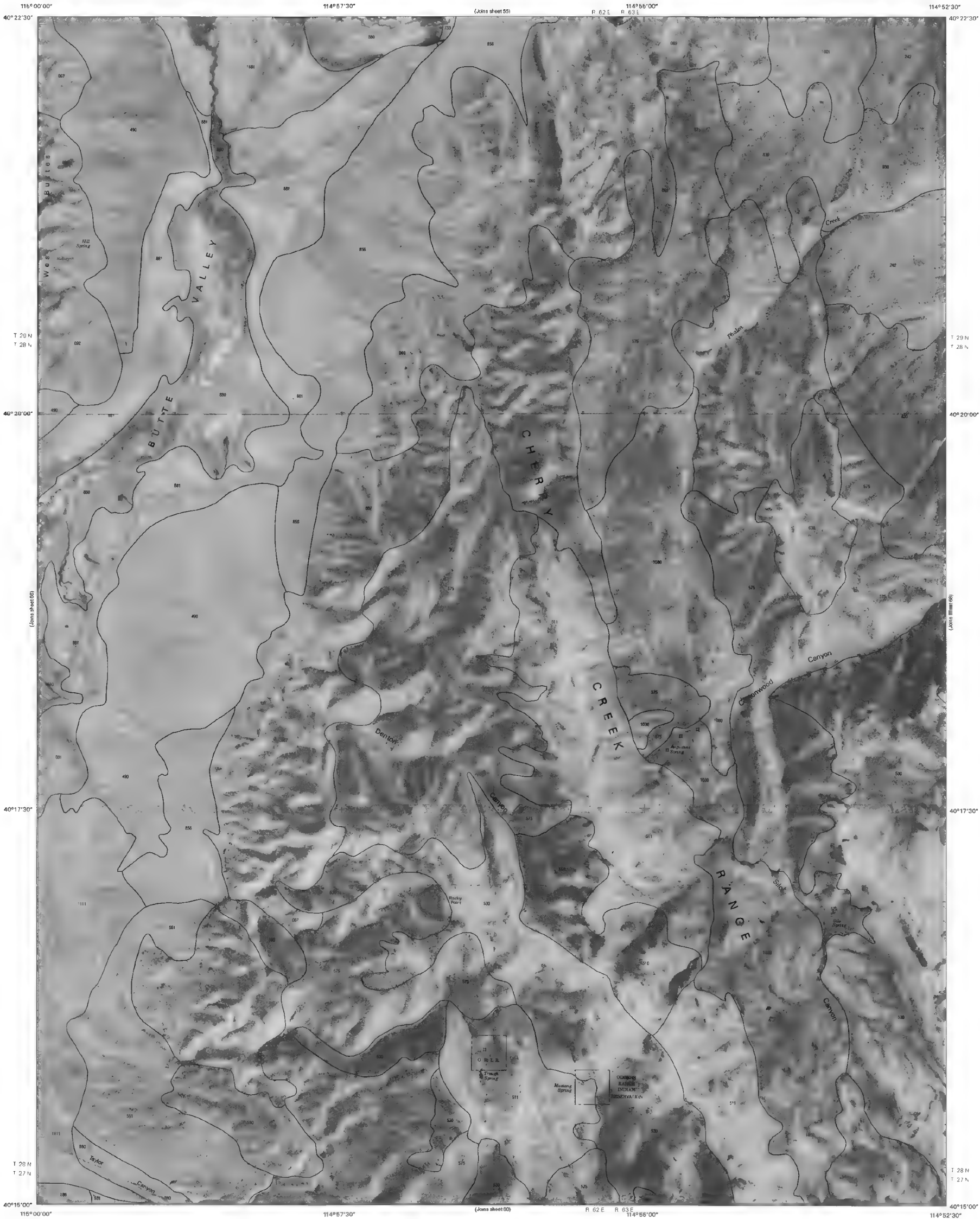
ODGERS RANCH, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 66 OF 98

QUADRANGLE LOCATION

1	2	3
4	5	6
7	8	9

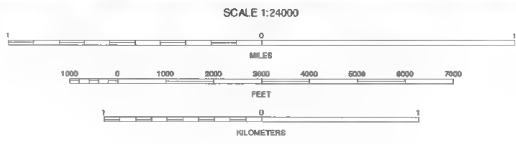
1 WEST OF DELCER BUTTES
2 DELCER BUTTES
3 PALMWOOD WELLS
4 MEDICINE SPRING
5 SILO CANYON
6 HIGH BALD PEAKS
7 HIGH BALD PEAKS NE
8 MOUNT TAYLOR

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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator zone 11 Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



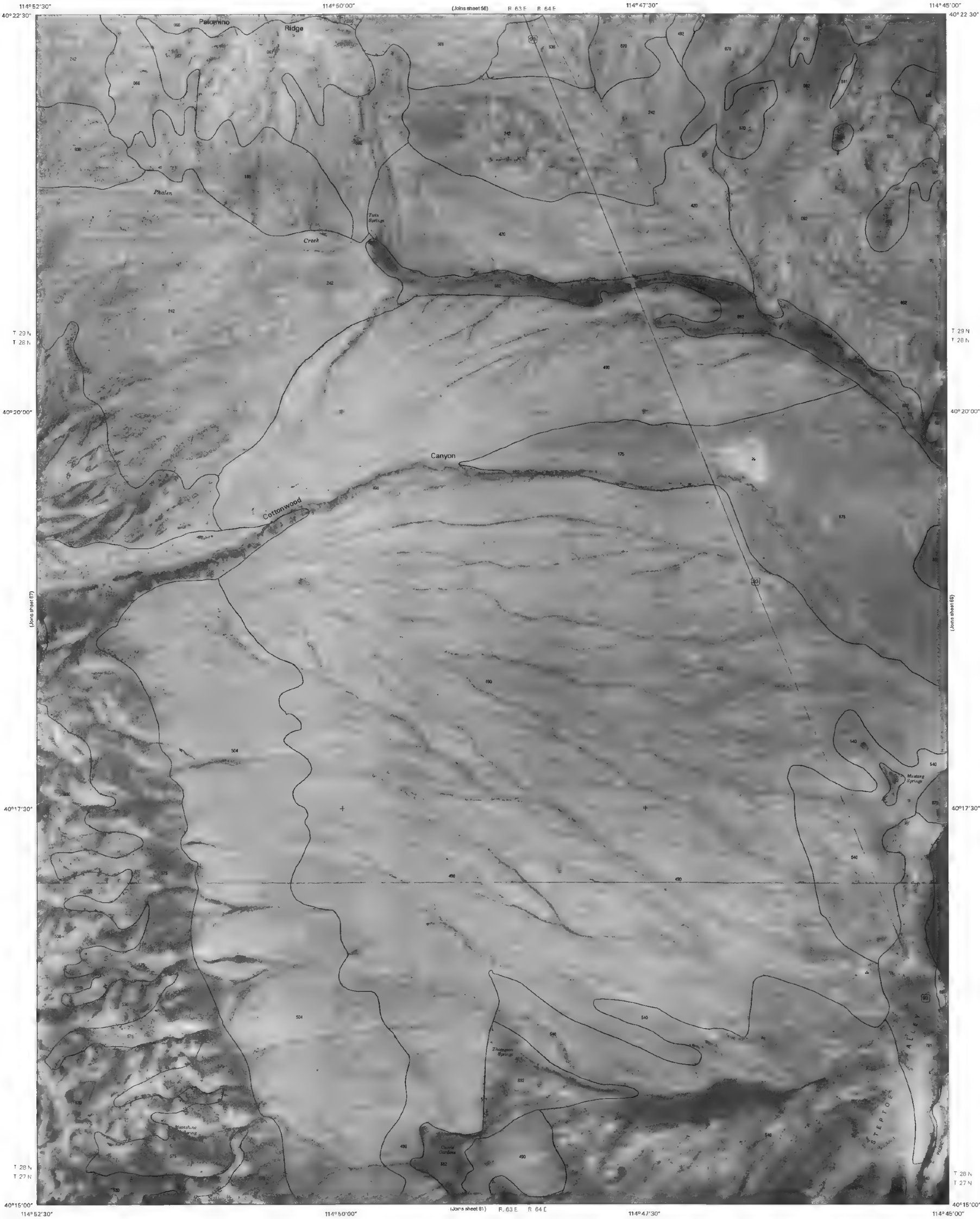
ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 67



SILO CANYON, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 67 OF 98

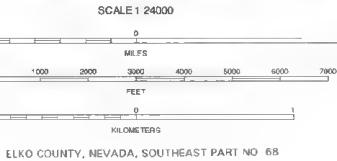
QUADRANGLE LOCATION			
1	2	3	1 DELCEP BUTTES
4	5	6	2 PALOMINO WELL
7	8	9	3 PALOMINO RIDGE
10	11	12	4 COOKS RANCH
13	14	15	5 CURRIE GARDENS
16	17	18	6 HIGH BALD PEAKS NC
19	20	21	7 MOUNT TAYLOR
22	23	24	8 MICHELMID RANCH

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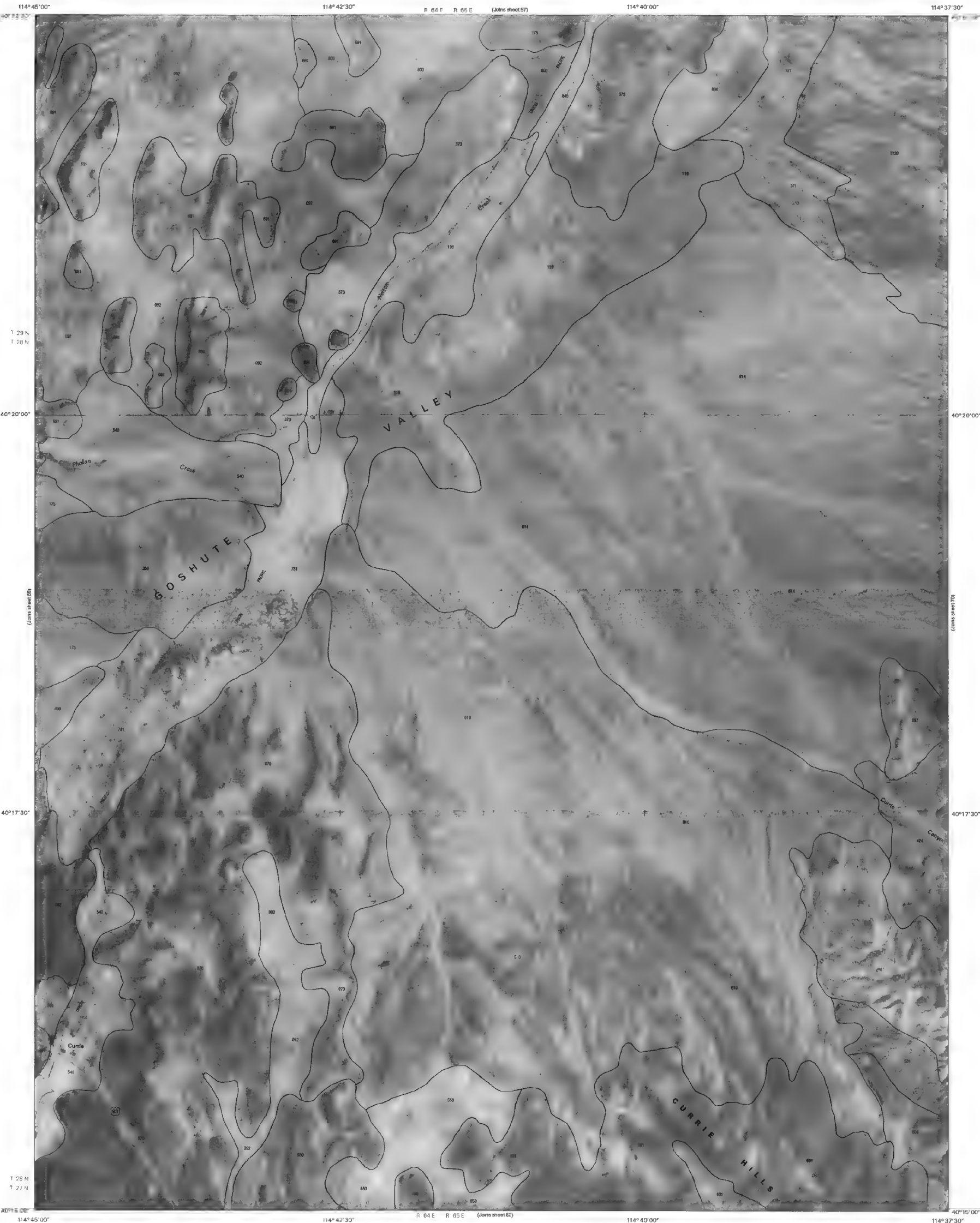
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks; Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



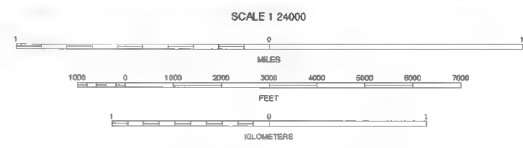
QUADRANGLE LOCATION			
1	2	3	1 PALOMINO WELL
4	5	6	2 PALOMINO RIDGE
7	8	9	3 MUD-PAN
			4 SILO CANYON
			5 CURRIE
			6 MOUNT TAYLOR
			7 MCDERMID RANCH
			8 GOSHUTE LAKE NORTH

CURRIE GARDENS, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 68 OF 98



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North American Datum of 1927 (NAD27). Clarke 1866 Spheroid. 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid lines and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 69

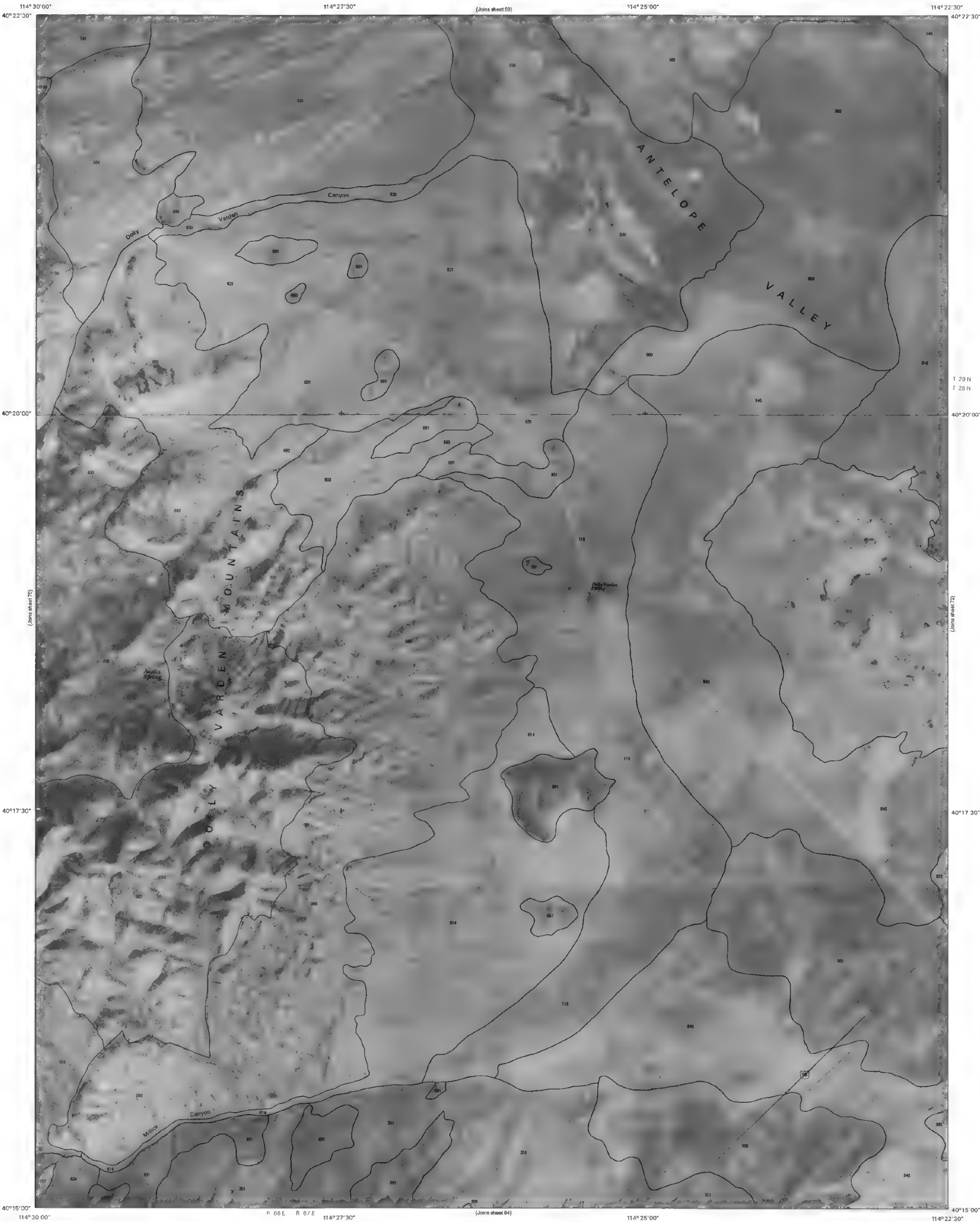


CURRIE, NEVADA
7.5-MINUTE SERIES
SHEET NUMBER 69 OF 98

QUADRANGLE LOCATION			
1	2	3	1. PALMISTO RIDGE
4	5	6	2. MIDWAY POINT
7	8	9	3. CURRIE GARDENS
10	11	12	4. SHARP PEAK
13	14	15	5. MODERNO RANCH
16	17	18	6. GOSHUTE LAKE NORTH
19	20	21	7. GOSHUTE LAKE NE

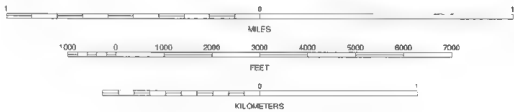
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North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks. Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 71



DOLLY VARDEN SPRING, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 71 OF 98

QUADRANGLE LOCATION				1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	4	5	6	7	8	9	10	11	12

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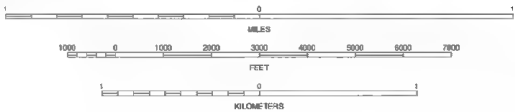


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27). Clarke 1866 Spheroid. 1000-meter scale. Universal Transverse Mercator, zone 11. Coordinate grid lines and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

N

SCALE 1:24000



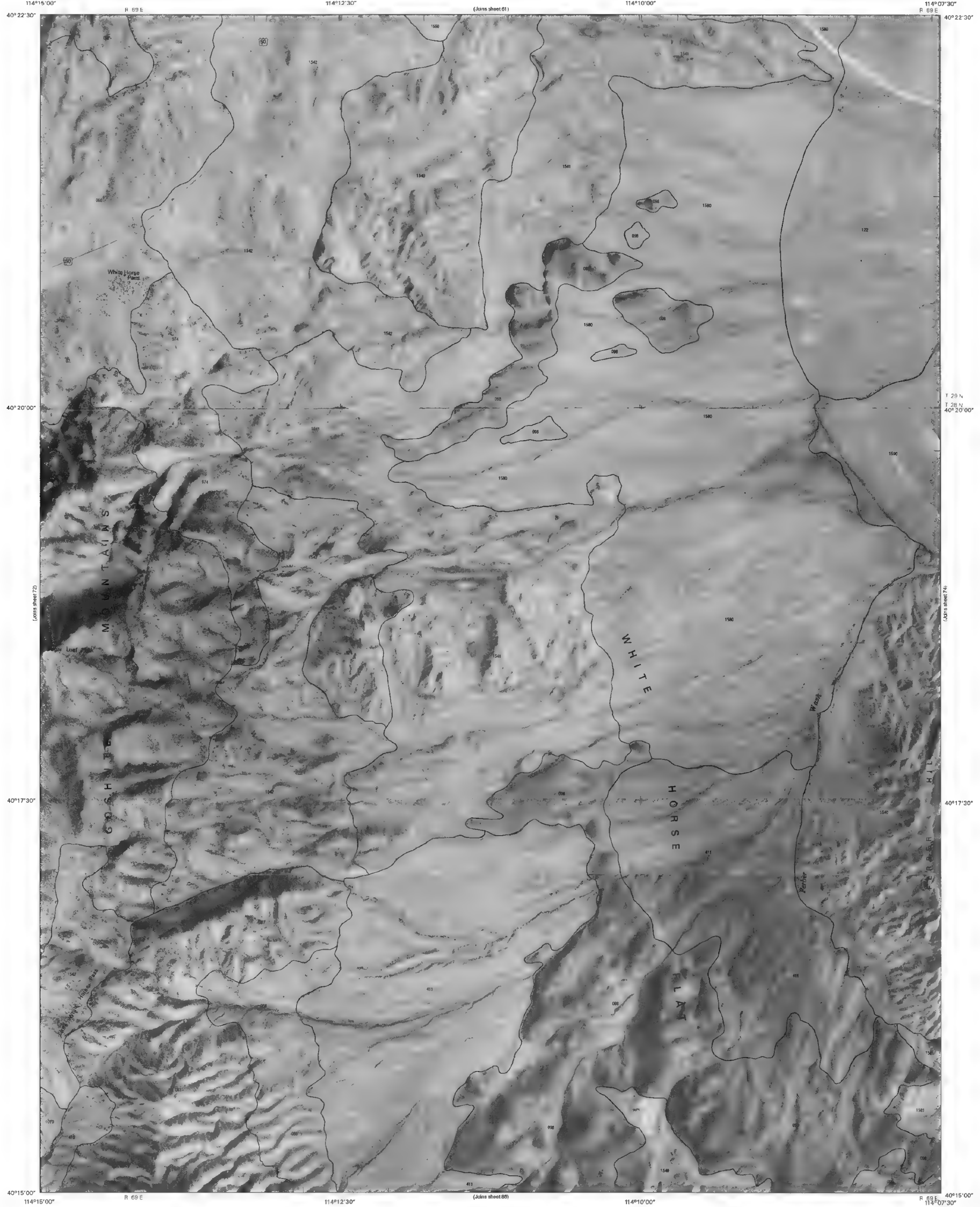
ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 72



WHITE HORSE MOUNTAIN, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 72 OF 98

QUADRANGLE LOCATION				
1	2	3		1 WHITE HORSE MOUNTAIN NW
				2 GOSHUTE PEAK
				3 FERGUSON MOUNTAIN
4		5		4 DOLLY VARDEN SPRING
				5 WHITE HORSE PASS
				6 BOONE CANYON
				7 KINSLEY MOUNTAINS
6	7	8		8 FERDER PEAK NW

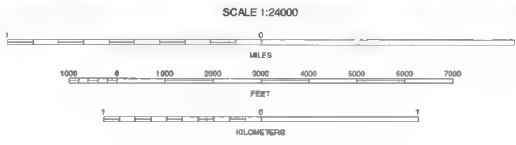
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This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

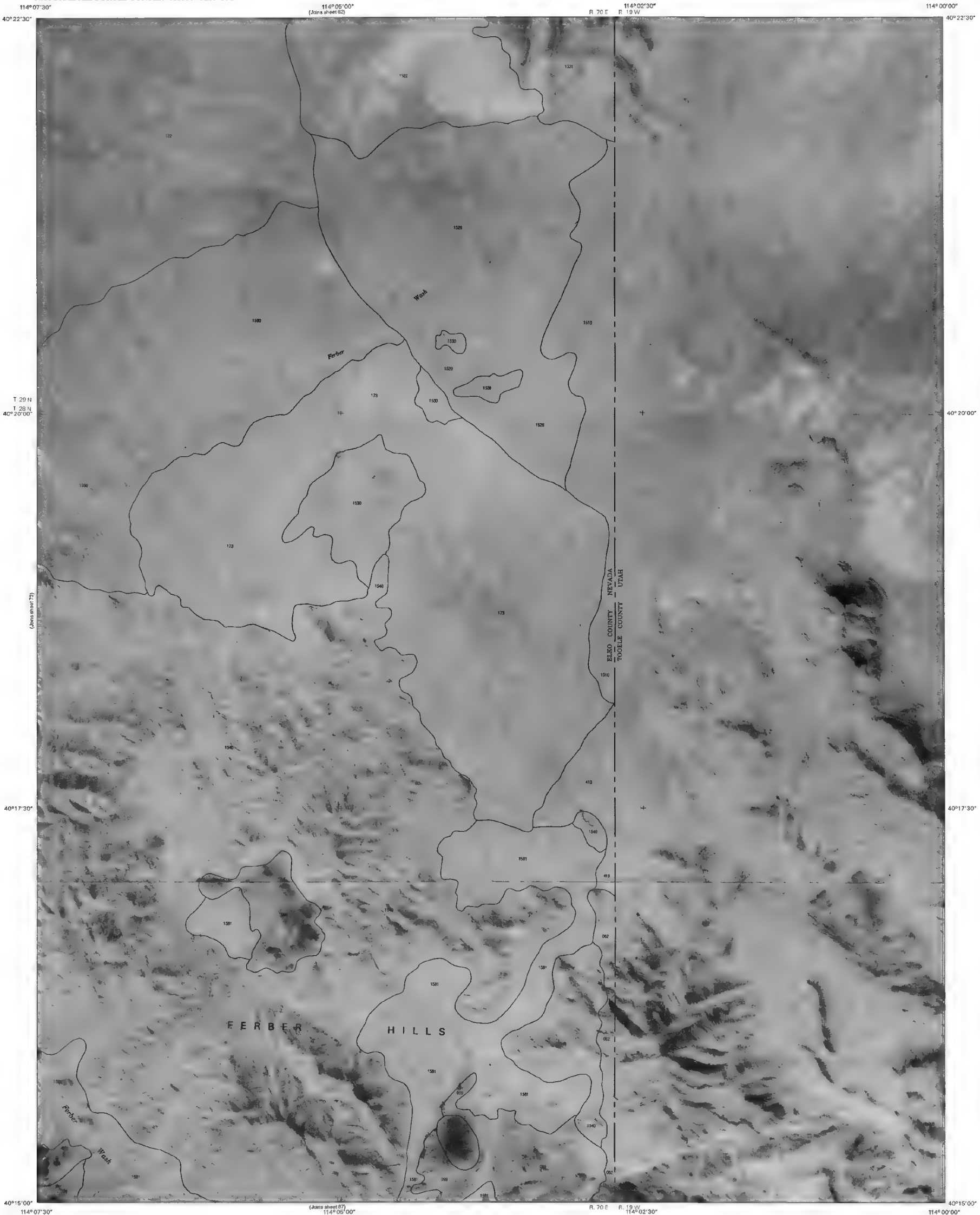
North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter boxes, Universal Transverse Mercator, zone 11. Coordinate grid lines and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

73



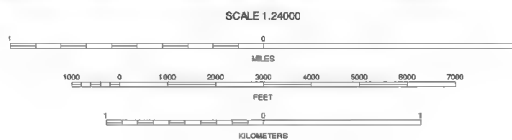
QUADRANGLE LOCATION			
1	2	3	1 GOSHUTE PEAK
4	5	6	2 FERGUSON MOUNTAIN
7	8	9	3 FERGUSON FLAT
10	11	12	4 WHITE HORSE MOUNTAIN
13	14	15	5 UTAH PEAK
16	17	18	6 KIMBLEY MOUNTAINS
19	20	21	7 PENDER PEAK NW
22	23	24	8 PENDER PEAK

WHITE HORSE PASS, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 73 OF 98



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks; Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 74



UTAH PEAK, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 74 OF 98

QUADRANGLE LOCATION					
1	2	3	4	5	6
1	2	3	4	5	6
1	2	3	4	5	6
1	2	3	4	5	6
1	2	3	4	5	6

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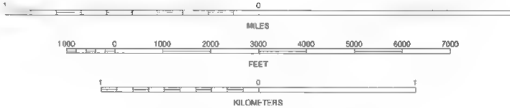


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthorectified photographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27) Clarke 1866 Spheroid 1000-meter ticks. Universal Transverse Mercator, Zone 11. Coordinate grid ticks and division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



SCALE 1:24,000



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 75



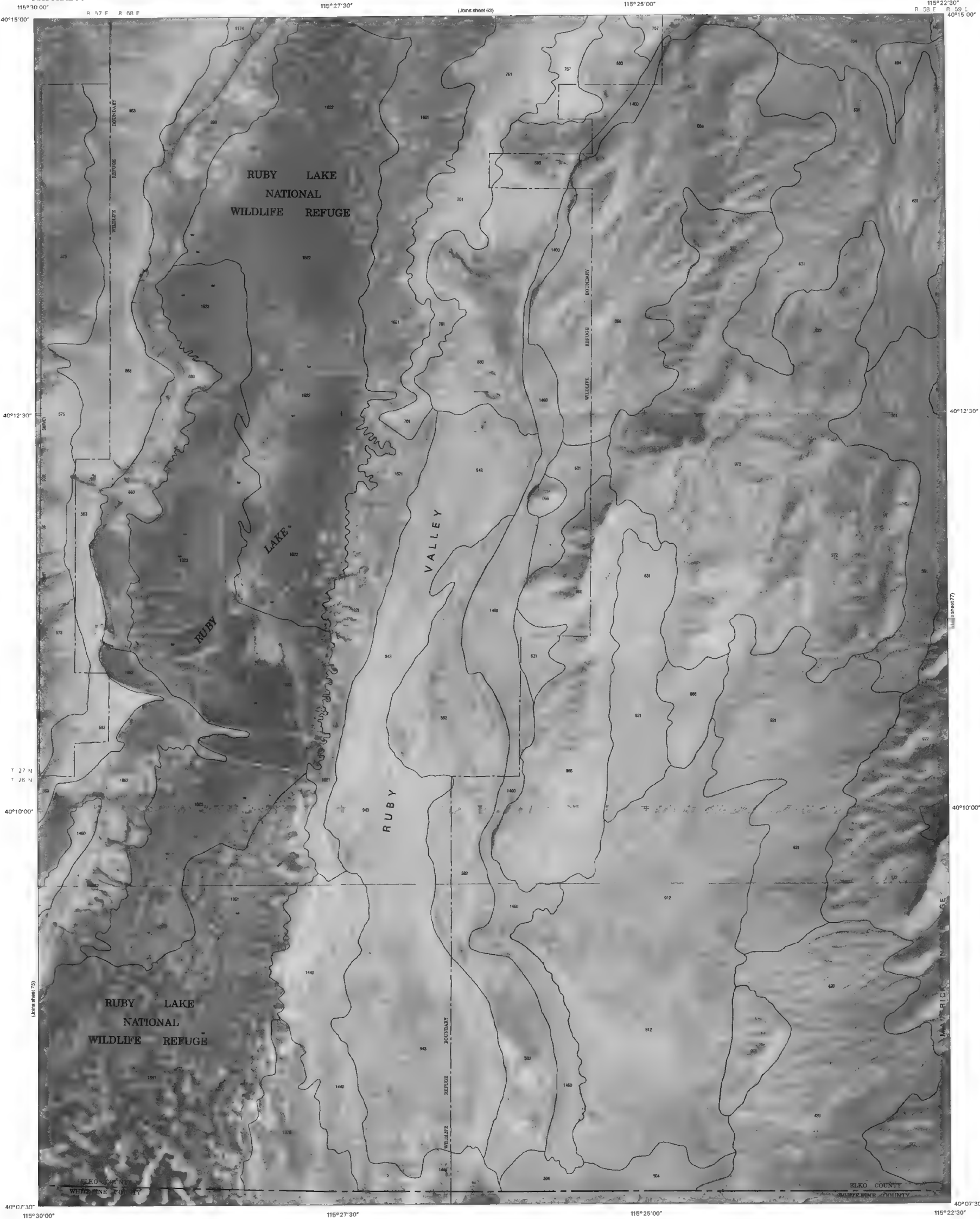
QUADRANGLE LOCATION

1	2	3
4	5	6
7	8	9

1 FROST CREEK
2 HARRISON PASS
3 FRANKLIN LAKE SW
4 BELMONT CREEK
5 RUBY LAKE NW
6 WALKER CANYON
7 SHERMAN MOUNTAIN
8 STATION BUTTE

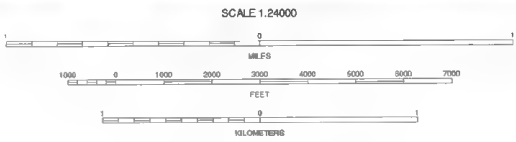
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PEARL PEAK, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 75 OF 98



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 76

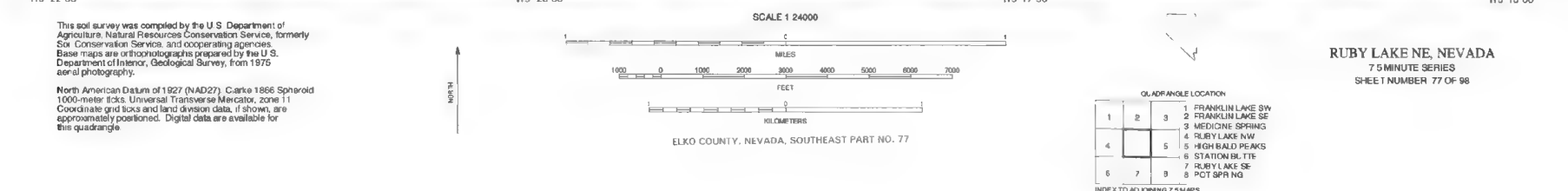


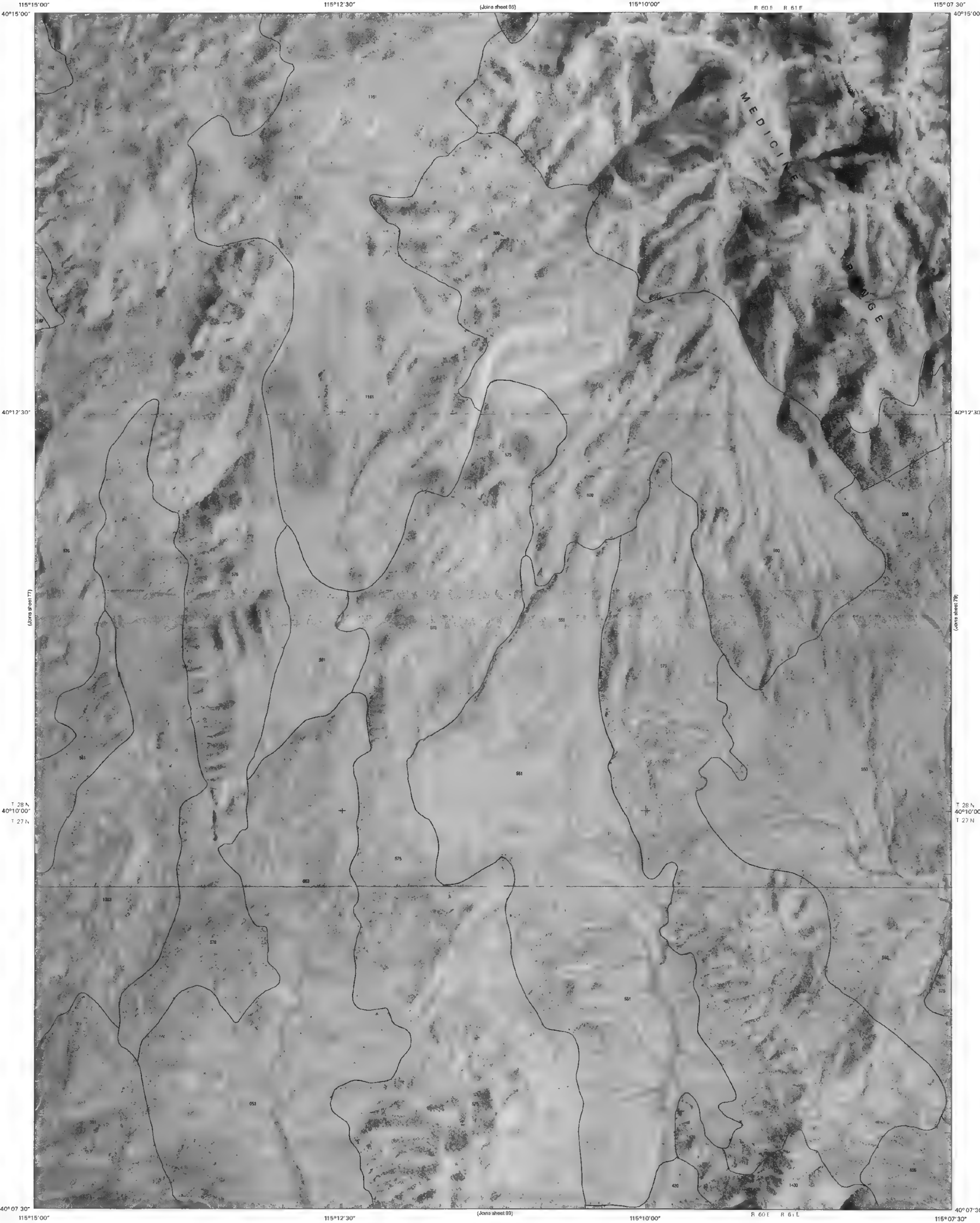
RUBY LAKE NW, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 76 OF 98

QUADRANGLE LOCATION							
1	2	3	4	5	6	7	8

1 HARRISON PASS
2 FRANK IN LAKE SW
3 FRANK IN LAKE SE
4 PEARL PEAK
5 RUBY LAKE NE
6 SHE-RAM MOUNTAIN
7 STATION BUTTE
8 RUBY LAKE SE

INDEX TO ADJOINING 7.5 MAPS

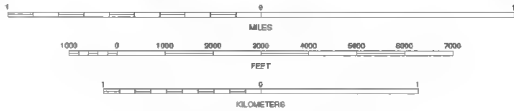




This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinates grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

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ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 78

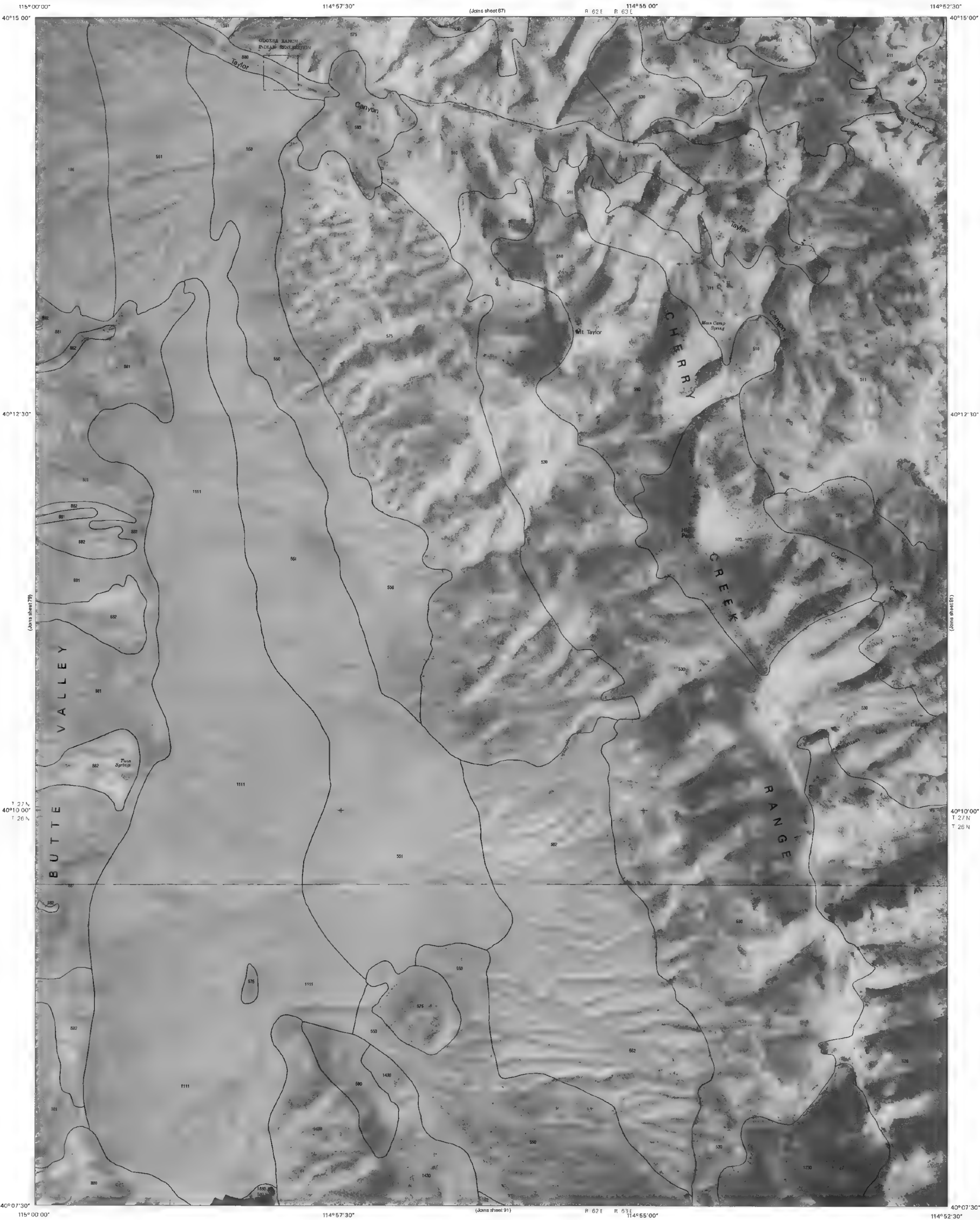


HIGH BALD PEAKS, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 78 OF 98

QUADRANGLE LOCATION

1	2	3	4	5	6	7	8
1 FRANKLIN LAKE SE	2 MEDICINE SPRING	3 DOCKERS RANCH	4 RUBY LAKE NE	5 H GH BALD PEAKS NE	6 RUBY LAKE SE	7 POT SPRING	8 H GH BALD PEAKS SE

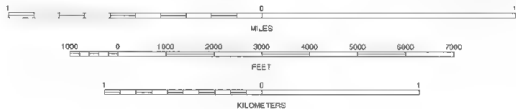
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This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

North American Datum of 1927 (NAD27), Clarke 1858 Spheroid 1000-meter ticks, Universal Transverse Mercator zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

N
↑
MILES



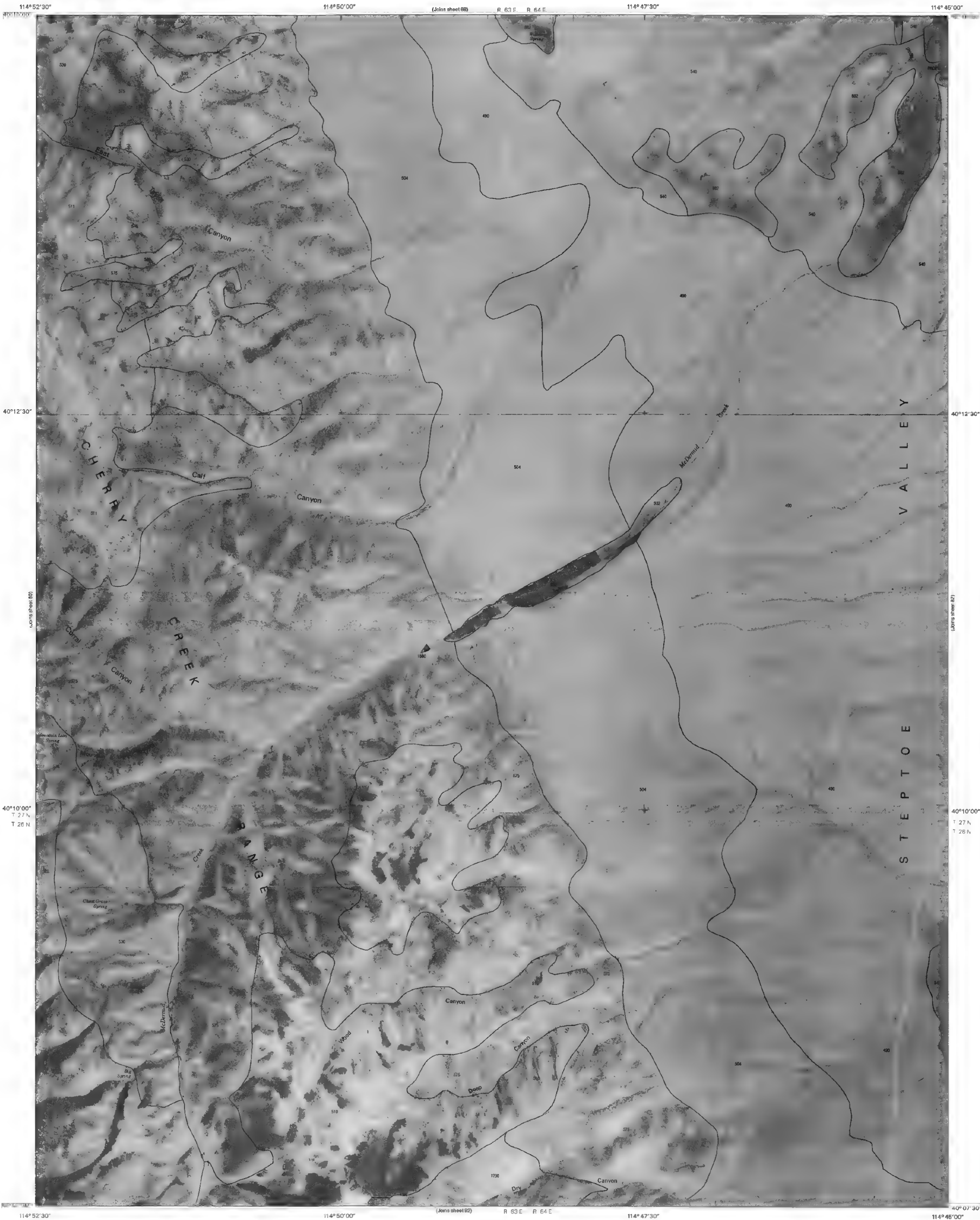
ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 80



MOUNT TAYLOR, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 80 OF 98

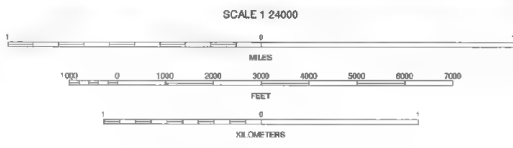
QUADRANGLE LOCATION			1	2	3
1	2	3	1 OODGERA RANCH	2 SILO CANYON	3 CURRIE GARDENS
4	5	6	4 HIGH BALD PEAKS NE	5 MCDEMID RANCH	6 HIGH BALD PEAKS SE
7	8	9	7 PAPA'S CREEK	8 GOSHUTE CREEK	

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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



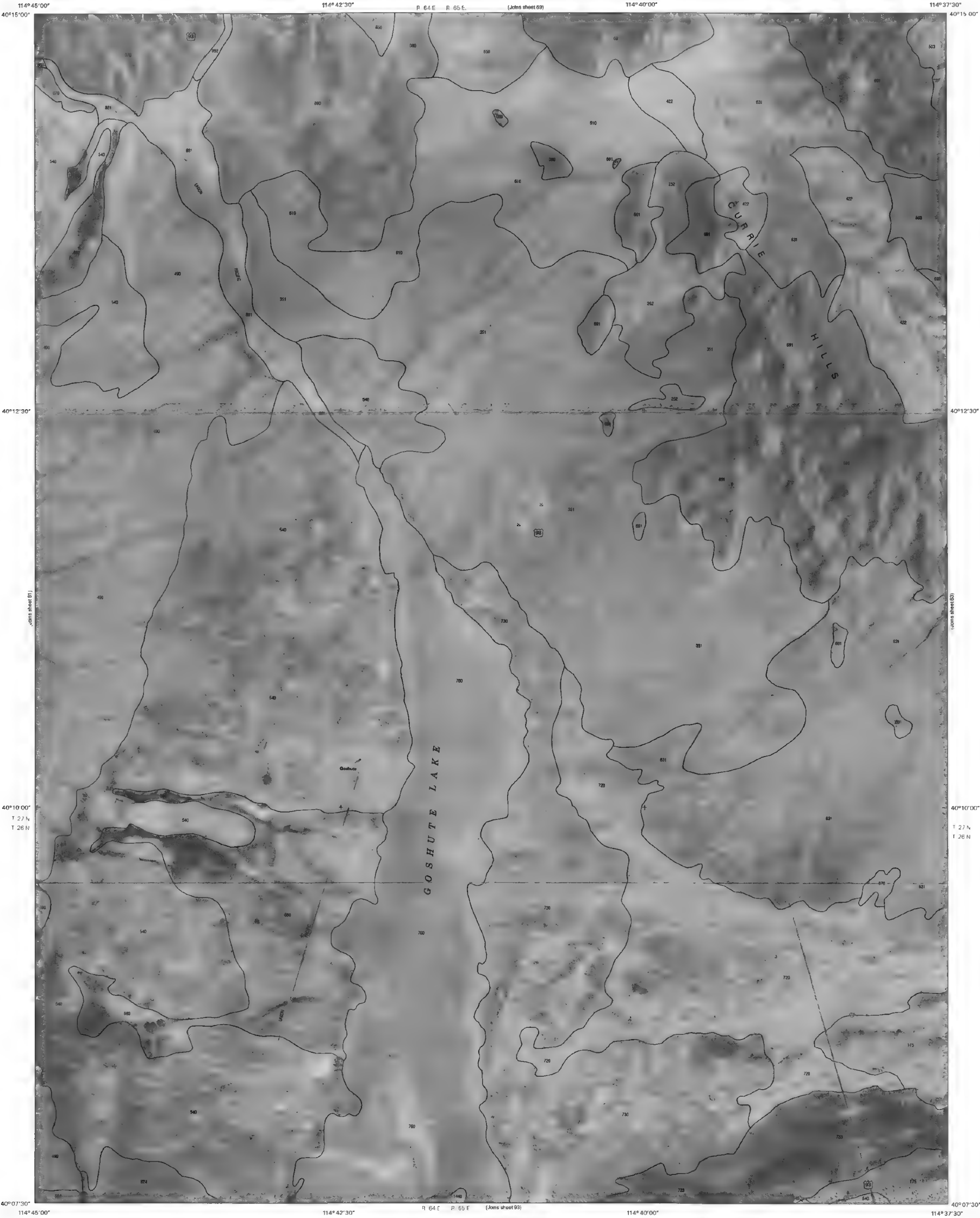
ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 81



MCDERMID RANCH, NEVADA
7.5-MINUTE SERIES
SHEET NUMBER 81 OF 98

QUADRANGLE LOCATION			
1	2	3	1. BILO CANYON
4	5	6	2. CURRIE GARDENS
7	8	9	3. CURRIE
10	11	12	4. MOUNT TAYLOR
13	14	15	5. GOSHUTE LAKE NORTH
16	17	18	6. PARS CREEK
19	20	21	7. GOSHUTE CREEK
22	23	24	8. GOSHUTE LAKE SOUTH

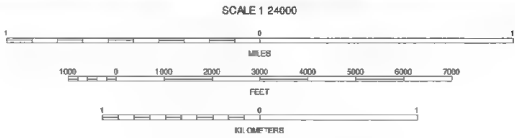
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North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinates grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

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GOSHUTE LAKE NORTH, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 82 OF 98

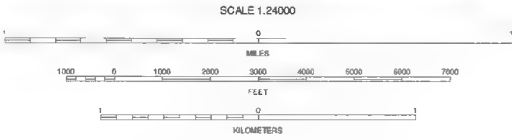
QUADRANGLE LOCATION			
1	2	3	1 CURRIE GARDENS
			2 CURRIE
			3 SHARP PEAK
4		5	4 MODERNO RANCH
			5 GOSHUTE LAKE NE
			6 GOSHUTE LAKE NW
			7 GOSHUTE LAKE SOUTH
6	7	8	8 LAGES STATION

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North American Datum of 1927 (NAD27) Clarke 1866 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 11
Coordinate grid ticks and and division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



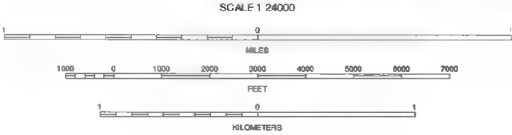
QUADRANGLE LOCATION			1	2	3	4	5	6	7	8
1	2	3	CURRIE	SHARP PEAK	DOLLY VARDEN SPRING	GOSHUTE LAKE NORTH	GOSHUTE LAKE SOUTH	LAGE'S STATION	CHIN CREEK SPRING	
4	5	6								
7	8	9								

GOSHUTE LAKE NE, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 83 OF 98



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1975 aerial photography.

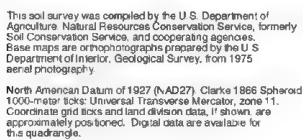
North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter base Universal Transverse Mercator, zone 11. Coordinates grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



BOONE CANYON, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 84 OF 98

QUADRANGLE LOCATION				1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	4	5	6	7	8	9	10	11	12

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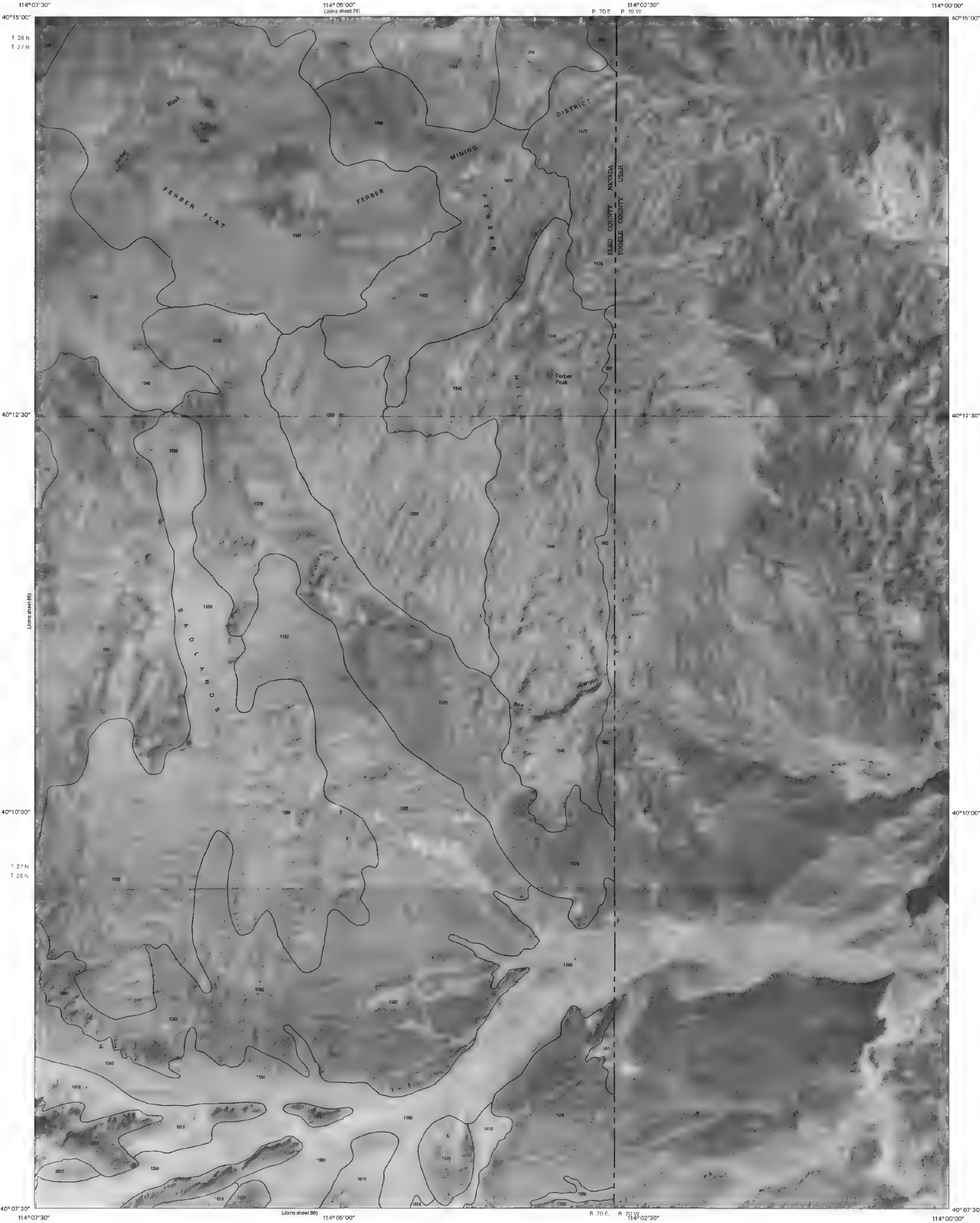


KINSLEY MOUNTAINS, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 85 OF 98

QUADRANGLE LOCATION				
1	2	3	1 DOLLY VARDEN SPRING	
			2 WHITE HORSE MOUNTAIN	
			3 WHITE HORSE PASS	
4		5	4 BOONE CANYON	
			5 FERBER PEAK NW	
			6 CHIN CREEK SPRING	
6	7	8	7 CHIN CREEK RESERVOIR	
			8 AYATREE SPRING	

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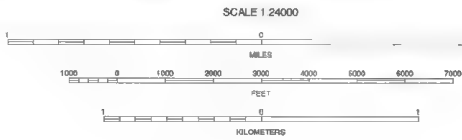




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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks. Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



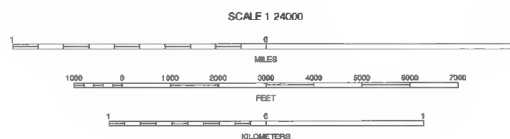
QUADRANGLE LOCATION			
1	2	3	1 WHITE HORSE PASS
4	5	6	2 UTAH PEAK
7	8	9	3 ELEPHANT KNOLL
10	11	12	4 FERBER PEAK NW
13	14	15	5 OCHRE MOUNTAIN
16	17	18	6 AYARBE SPRING
19	20	21	7 FERBER PEAK SE
22	23	24	8 ISAPAH

FERBER PEAK, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 87 OF 98



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North American Datum of 1927 (NAD27); Clarke 1866 Spheroid 1000 meter ticks; Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



RUBY LAKE SE, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 88 OF 98

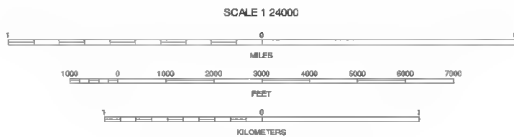
QUADRANGLE LOCATION				
1	2	3		1 RUBY LAKE NW
				2 RUBY LAKE NE
				3 HIGH BALD PEAKS
				4 STATION BUTTE
4		5		5 POT SPRING
				6 TOGNINI SPRING
				7 JUNCTION WELL
5	7	8		8 NINEMILE WELL, NW

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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



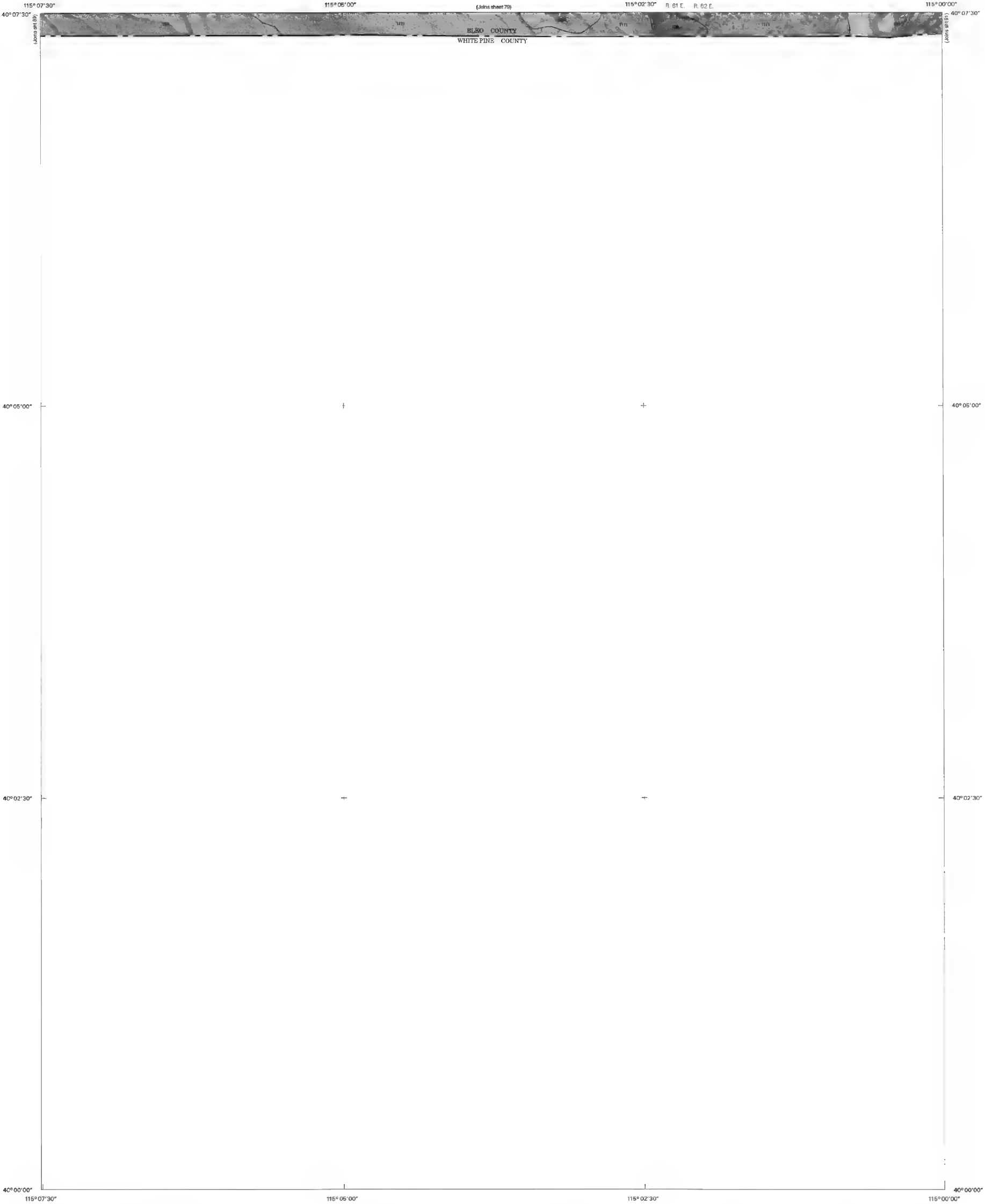
ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 89



POT SPRING, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 89 OF 98

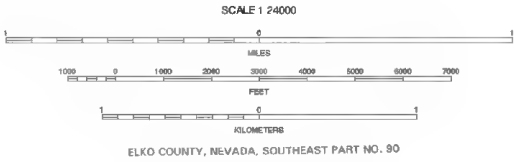
QUADRANGLE LOCATION			
1	2	3	1 RUBY LAKE NE
			2 HIGH BALD PEAKS
			3 HIGH BALD PEAKS NE
			4 RUBY LAKE SE
4		5	5 HIGH BALD PEAKS SE
			6 JUNCTION WELL
	7	8	7 NINEMILE WELL NW
			8 NINEMILE WELL

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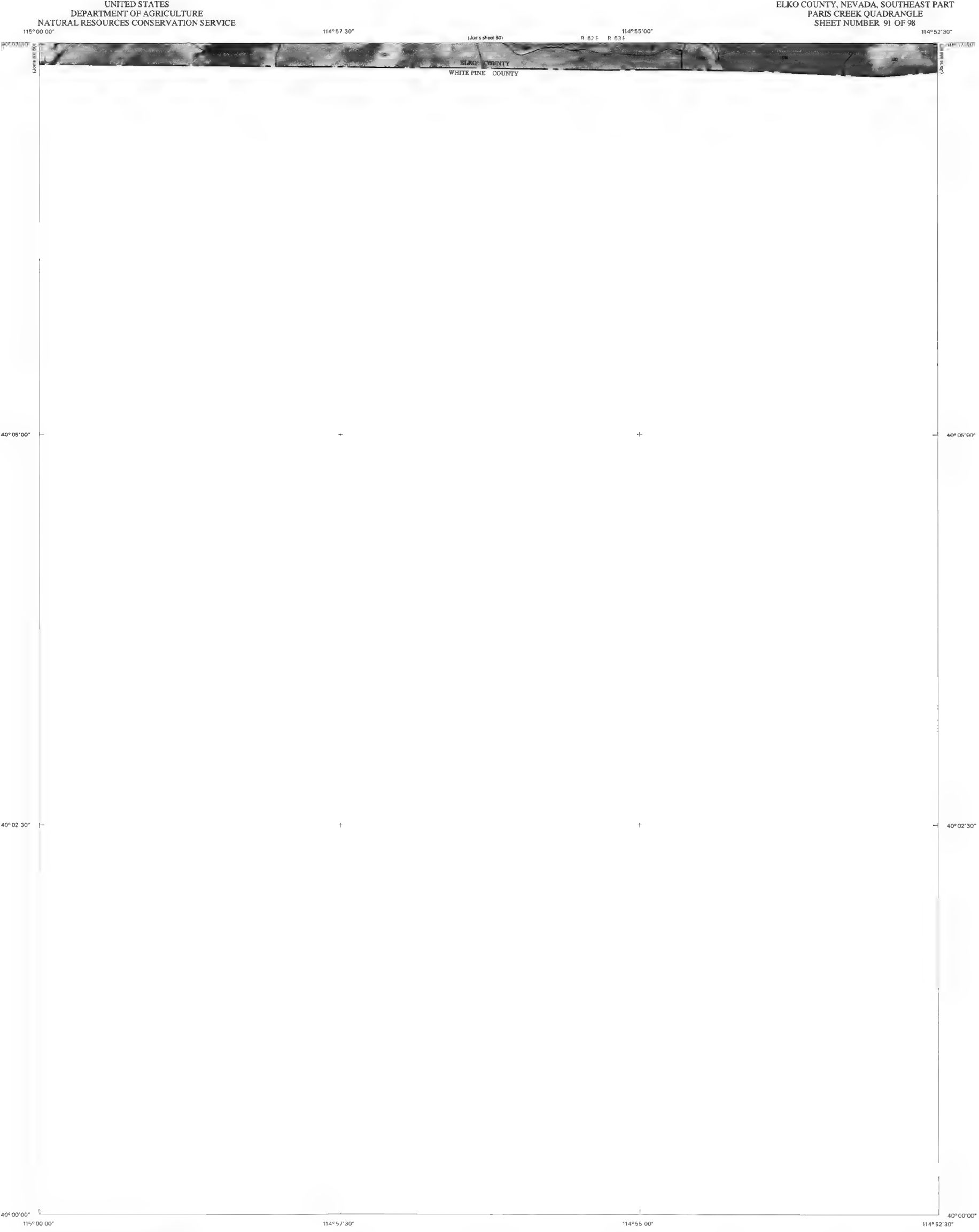
North American Datum of 1927 (NAD27). Clarke 1866 Spheroid 1000-meter ticks. Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



HIGH BALD PEAKS SE, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 90 OF 98

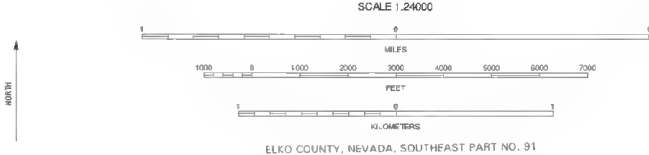
QUADRANGLE LOCATION			
1	2	3	1 HIGH BALD PEAKS
			2 HIGH BALD PEAKS NE
			3 MOUNT TAYLOR
			4 POT SPRING
4		5	5 PARS CREEK
			6 NINEMILE WELL NW
	7	8	7 NINEMILE WELL
6			8 CHERRY CREEK

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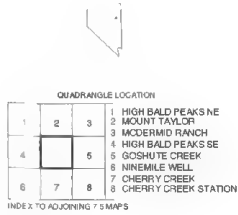


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North American Datum of 1927 (NAD27). Clarke 1866 Spheroid. 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

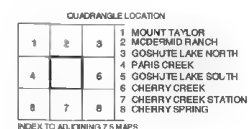


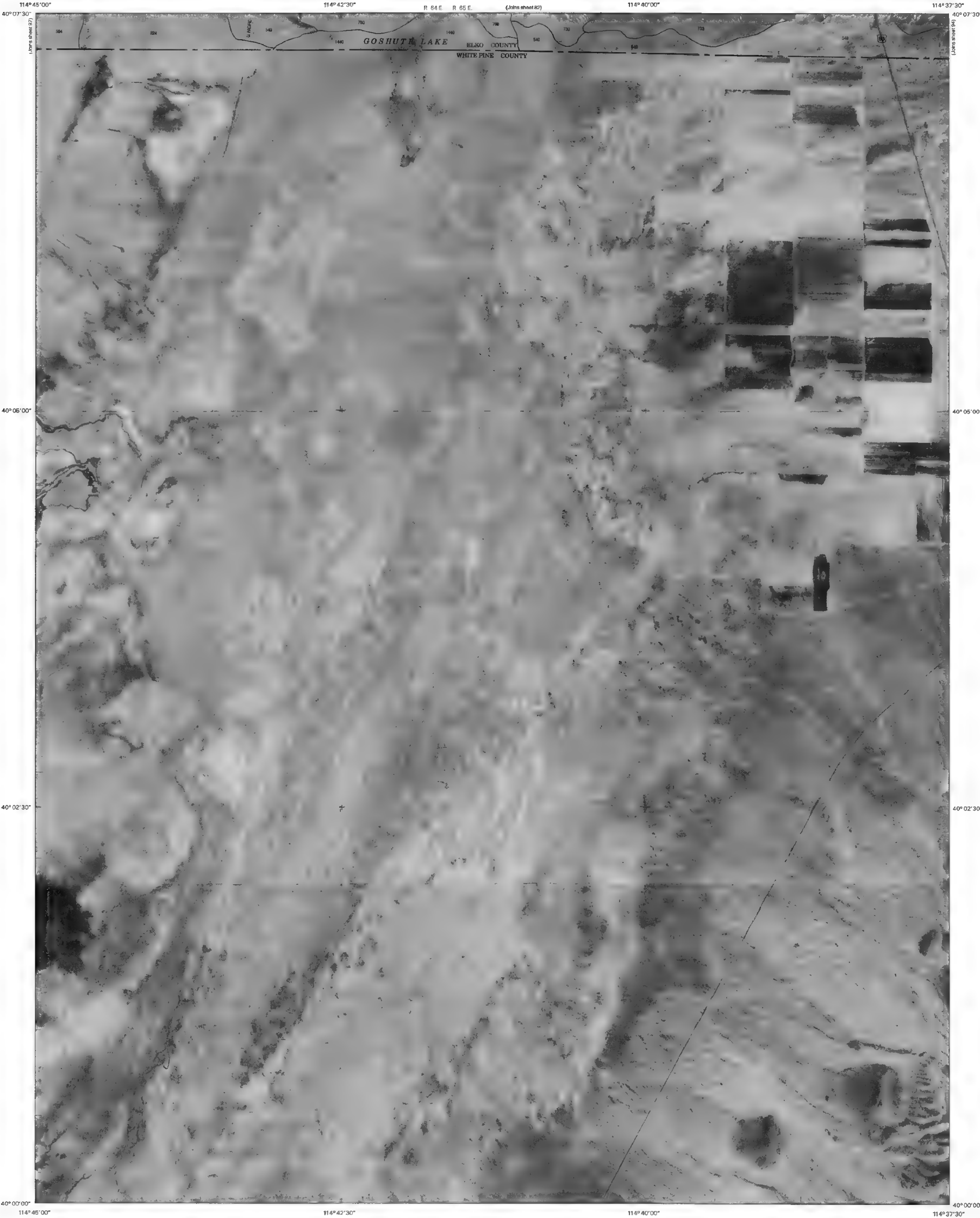
ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 91



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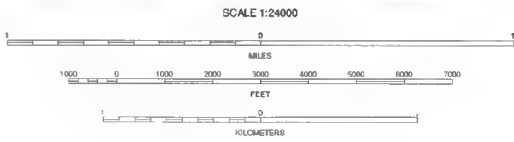
PARIS CREEK, NEVADA
7.5-MINUTE SERIES
SHEET NUMBER 91 OF 98





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North American Datum of 1927 (NAD27). Clarke 1866 Spheroid. 1000-meter ticks. Universal Transverse Mercator, zone 11. Coordinate grid lines and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO 93



GOSHUTE LAKE SOUTH, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 93 OF 98

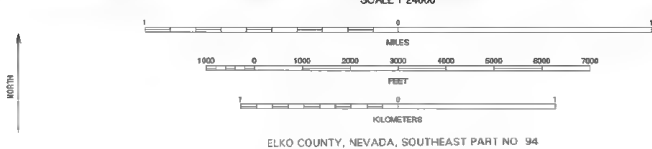
QUADRANGLE LOCATION			
1	2	3	1 MCDERMID RANCH
			2 GOSHUTE LAKE NORTH
			3 GOSHUTE LAKE NE
4		5	4 GOSHUTE CREEK
			5 LAGES STATION
			6 CHERRY CREEK STATION
	7	8	7 CHERRY SPRING
			8 BECKY PEAK

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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 94



LAGES STATION, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 94 OF 98

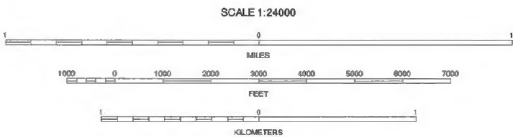
QUADRANGLE LOCATION			
1	2	3	1 GOSHUTE LAKE NORTH
			2 GOSHUTE LAKE NE
			3 BOONE CANYON
4		5	4 GOSHUTE LAKE SOUTH
			5 CHIN CREEK SPRING
			6 CHERRY SPRING
			7 BECKY PEAK
6	7	8	8 BALDY PEAK

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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



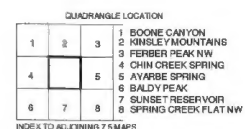
ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 95

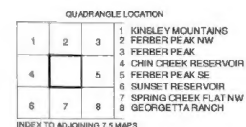
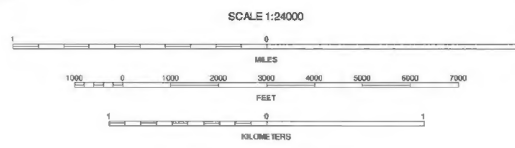
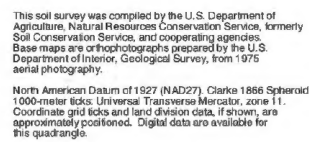


CHIN CREEK SPRING, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 95 OF 98

QUADRANGLE LOCATION			
1	2	3	1 GOSHUTE LAKE NE
			2 BOONE CANYON
			3 KIMBLEY MOUNTAINS
4		5	4 LAGES STATION
			5 CHIN CREEK RESERVOIR
			6 BECKY PEAK
6	7	8	7 BALDY PEAK
			8 SUNSET RESERVOIR

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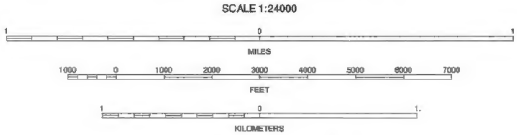






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North American Datum of 1927 (NAD27), Clarke 1866 Spheroid 1000-meter ticks Universal Transverse Mercator, zone 11. Coordinate and ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



ELKO COUNTY, NEVADA, SOUTHEAST PART NO. 98



FERBER PEAK SE, NEVADA
7.5 MINUTE SERIES
SHEET NUMBER 98 OF 98

QUADRANGLE LOCATION							
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8

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